INTERNATIONAL CIVIL AVIATION ORGANIZATION

**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
FOURTEENTH MEETING (APIRG/14)**

(Yaoundé, Cameroon, 23 - 27 June 2003)

Agenda Item 4: **Review of Reports of APIRG Sub-Groups and other Subsidiary
Bodies**

4.3: **Review of the Report of the Seventh Meeting of the ATS/AIS/SAR
Sub-Group (ATS/AIS/SAR/SG/7)**

(Presented by the Secretariat)

SUMMARY

This paper presents the report of the Seventh Meeting of the ATS/AIS/SAR
Sub-Group. The Sub-Group reviewed its terms of reference (**Appendix B**),
work programme and applicable procedure. It also reviewed the air
navigation plan requirements in the fields of Air Traffic Services,
AIS/MAP and Search and Rescue aimed at meeting the current and future
aircraft operations. In carrying out the review the Sub-Group identified
specific air navigation planning and implementation problems and made
recommendations for appropriate remedial actions.

Action by APIRG is at paragraph 3

References:

ATS/AIS/SAR/SG/7 - Report
APIRG/13 - Report
AFI/7 RAN Meeting Report (Doc 9702)
APIRG Procedural Handbook

1. Introduction

1.1   The seventh meeting of the ATS/AIS/SAR Sub-Group (ATS/AIS/SAR/SG/7)
was convened by the International Civil Aviation Organization at the ICAO ESAF Office,
Nairobi from 14 to 18 October 2002. Copies of the report were distributed to members of the
Sub-Group as well as to AFI provider and user States. The meeting was attended by **53** experts
from **14** Member States and **4** Member Organizations namely, IATA, ASECNA, IFATCA and
IFALPA and **1** non-Member Organization (AFCAC).

1.2   The Sub-Group recorded its action in the form of draft Conclusions and draft Decisions. Apart from endorsement of the report, the action required from APIRG is related to 61 draft conclusions and 1 draft decision which are submitted for consideration in **Appendix A** to this paper.

2.   Discussion

2.1   Review of the ATS route network

2.1.1   Under this Agenda item, the Sub-Group considered in detail the overall status of implementation of the basic ATS route network including RNAV routes contained in the ICAO AFI Air Navigation Plan (Doc 7474/27) Table ATS 1, Charts ATS 2 and ATS 3 in order to:

a)   identify additional route requirements;

b)   identify route segments requiring realignment;

c)   identify routes which can be deleted from the Air Navigation Plan (ANP);

d)   update "Notes" in the Table ATS 1;

e)   identify the non implemented routes and establish target date(s) for their implementation.

2.1.2   The Sub-Group identified a requirement for two new ATS routes, namely:

Geneina – Port Sudan (RNAV) and;
Cotonou – Malabo

2.1.3   The meeting noted that no route required realignment or deletion.

2.1.4   The Sub-Group prepared an implementation tabulation for all the non-implemented routes and agreed that States be requested to implement those routes not later than **22 January 2004.**

2.1.5   The Sub-Group accordingly updated the notes on ATS routes of Table ATS 1 of the Air Navigation Plan. In view of the foregoing, draft conclusions 7/1, 7/2 and 7/3 were formulated.

2.2   Review of implementation of the Area Control Service

2.2.1   Under this Agenda item, the Sub-Group reviewed the requirements for implementation of the Area Control Service in the Region.

2.2.2   The Sub-Group recalled the statement of the Basic Operational Requirements and Planning Criteria in AFI Region requiring that Area Control Service should be provided for all IFR flights along all ATS routes to be used by international aircraft operations, except where the type and density of traffic do not justify the provision of such service. Furthermore, the statement requires that Approach Control Service should be provided at all aerodromes used for international aircraft operations and that control areas should be established so as to encompass at least the climb to cruising levels of departing aircraft and the descent from cruising level of arriving aircraft. The AFI/7 RAN meeting in reviewing the status of implementation of the area control service in the region developed an implementation strategy which was the subject of its Recommendation 5/21.

2.2.3   The Sub-Group noted with concern that the status of implementation of the area control service has been very slow and it accordingly considered necessary to extend the implementation target date to **31 December 2003**. Based on the foregoing, the Sub-Group formulated draft conclusion 7/4.

2.3   Review of the implementation of ATS Direct Speech (ATS/DS) Circuits

2.3.1   The Sub-Group recalled that South Africa had restructured its airspace reducing the existing number of FIRs. It recommended therefore that South Africa should submit an amendment proposal to reflect these changes, including in particular the ATS D/S circuits.

2.3.2   The Sub-Group also identified the requirement for an ATS D/S circuit between Lagos and Niamey and, to this effect, adopted draft conclusions 7/5 and 7/6.

2.4   Review of the report of the first meeting of the RVSM/ RNAV/ RNP Task Force

2.4.1   Under this Agenda Item, the Sub-Group reviewed the report of the RVSM/RNAV/RNP Task Force Meeting which was held in Dakar, Senegal from 17-18 June 2002 pursuant to AFI/7 meeting recommendations 5/7, 5/17 and APIRG/13 Decision 13/58. The Sub-group reviewed the report of the first meeting of the Task Force under its terms of reference as well as the agenda that covered, among others, development of guidance material for RVSM/RNAV/RNP implementation, development of an implemetation plan for RVSM, developmment of time scales for the implementation plan of the RVSM/RNAV/RNP and development of the future work programme to complete other remaining tasks.

2.4.2   The Sub-group noted however that,due to the limited time available,it was not possible for the Task Force to develop a sample AIC as well as a sample national legislation that would be promulgated by States intending to participate in the programme of implementation of RVSM. In view of the foregoing the Sub-Group endorsed draft conclusions 7/7, 7/8, 7/9, 7/10, 7/11, 7/12, 7/13, 7/14, 7/15, 7/16, 7/18, 7/19, 7/20, 7/21, 7/22, 7/23,7/24 and draft decision 7/17.

2.5   Review of the Report of the second meeeting of the Airspace Management Task Force (ASM/TF 2)

2.5.1   Under this Agenda Item the Sub-Group reviewed the Report of the Second Meeting of the Airspace Management Task Force which was held in Dakar, Senegal from 13 to 14 June 2002.

2.5.2   The Sub- Group noted that the Task Force had reviewed its Terms of Reference and had proposed changes thereto. These appear at **Appendix H** to the report of the ATS/AIS/SG/7. paper.

2.5.3   The Sub-Group recalled that the Airspace Management Task Force was established within the framework of the ATS/AIS/SAR Sub-Group in order to explore ways and means of solving some pressing problems affecting the safety of air navigation in the region and propose operational solutions.

2.5.4   The Sub-Group noted that the Task Force meeting had reviewed the various aspects concerning the ATS airspace organization in the Region covering in the agenda the following: airspace organisation, establishment and identification of significant reporting points and the allocation of five letter name-code designators to the relevant significant points, implementation of 10 minutes longitudinal separation, development of Chart ATM 1 for the FASID document, and the review of SIDs and STARs. The Sub-Group then discussed in detail the report of the Task force and noted with appreciation the detailed analysis carried out by the Task force and finally endorsed draft conclusions 7/25, 7/26, 7/27, 7/28, 7/29, 7/30, 7/31, 7/32, 7/33, 7/34, 7/35, 7/36 and 7/37.

2.6   Review of the Report of the Second Meeting of the AIS Automation Task Force (AIS/MAP/TF/2)

2.6.1   Under this Agenda Item the Sub-Group reviewed the report of the second meeting of the AIS/MAP Automation Task Force which was held in Nairobi, from 25 to 27 September 2002. Among the issues covered were the provisions governing the automation of the integrated aeronautical information package. Based on the Task Force report, the Sub-Group updated the list of deficiencies in the field of AIS/MAP and emphasized that appropriate measures should be taken in order to eliminate them.   The meeting thus endorsed draft conclusions 7/38, 7/39, 7/40, 7/41, 7/42, 7/43, 7/44, 7/45 and 7/46.

2.7   Review of the implementation of ICAO requirements for WGS 84 coordinates and mandatory charts

2.7.1. The Sub-Group examined the above requirements under Agenda Item 8 and felt that their implementation had remained unsatisfactory although a significant improvement was noted in some States. The Sub- Group was of the view that States and ICAO should continue their efforts aimed at devoting more attention to AIS and MAP Services in the Region so as to achieve the level of efficiency required by the international aircraft operations.

The meeting noted that the Task Force had established a small committee to address, among others, issues relating to the sheets of the world aeronautical chart - ICAO 1 :1000 000. The Sub-Group endorsed draft conclusions 7/47, 7/48 and 7/49.

2.8   **Review of the implementation of ICAO requirements in the field of Search and Rescue (SAR)**

2.8.1   Under this agenda item the Sub-Group reviewed the status of implementation of the ICAO provisions relating to search and rescue services. It was noted with concern that most of these provisions had remained unimplemented for decades and the meeting was of the view that States should now be sensitized on the need to take remedial action. Furthermore, the Sub-Group sustained that assistance should be provided by ICAO in order to improve the provision of search and rescue services in the Region.

2.8.2   It was pointed out that major deficiences still existed in the following areas :

- Co-operation between States in order to promote a more effective and economic utilization of SAR facilities;

- Training of SAR personnel;

- Requirement for search and rescue exercises;

- Implementation of local user terminal/mission control centre (LUT/MCC) in the AFI Region, at locations that would take maximum advantage of satellite coverage to receive distress signals**;**

- Publication by States in their respective AIPs of information on the ELT registration which could be shared with rescue co-ordination centres (RCCs) of other States;

- Establishment of appropriate SAR agreements and legislation.

2.8.3   The Sub-Group also noted that AFCAC was willing to assist States in the region in bringing improvement in their SAR services and emphasized on the need for States to support the AFCAC SAR initiative. Furthermore, the Sub-Group noted the meeting proposal to create a small Task Force under the Sub - Group to address issues relating to the implementation of the pending SAR provisions not covered under the AFCAC project.

2.8.4   In view of the foregoing, the Sub-Group endorsed draft conclusions 7/50 , 7/51 and 7/52.

2.9   **Consideration of the operational implications of the introduction of ICAO CNS/ATM System in the AFI Region**

2.9.1   The Sub-Group reviewed the ATM operational requirements in the AFI CNS/ATM Plan (Doc 003). It noted that this Plan was adequate and only minor amendments to the Plan were necessary. The Sub-Group then formulated draft conclusions 7/53, 7/54, 7/55 and 7/56.

2.10   **Consideration of specific air navigation planning and implementation problems and the review of air navigation field deficiencies**

2.10.1   The Sub-Group, using the approved methodology, updated the list of deficiencies in the ATS, SAR and AIS/MAP fields as presented in WP/14 and formulated draft conlusion 7/57.

2.11   **Review of outstanding Conclusions and Decisions of APIRG, Decisions of the ATS/AIS/SAR/SG and its future work programme**

2.11.1   The Sub-Group reviewed its outstanding Conclusions and Decisions in the light of developments in order to keep them current and limit their number to a minimum consistent with the progress achieved in their implementation. The meeting thus endorsed draft conclusion 7/58.

2.11.2   The Sub-Group reviewed its terms of reference and future work programme and accorded priority for implementation of the tasks. This appears at **Appendix B** to this working paper.

2.12   **Any Other Business**

2.12.1   The Sub-Group noted the request submitted by Ghana and Zimbabwe to become additional members of the ATS/AIS/SAR Sub-Group.

2.12.2   The Sub-Group was also concerned about the matters relating to the lack of implementation of the ICAO provisions governing contingency plans, reporting and analysis of ATS incidents, ATS operational auditing and proficiency maintenance.

2.12.3   Based on the foregoing, the Sub-Group formulated draft conclusions 7/59, 7/60, 7/61 and 7/62.

3.   Action required

3.1   The APIRG is invited to:

   a)   note the report of the seventh meeting of the ATS/AIS/SAR Sub-Group;

   b)   take action on the draft conclusions and decisions of the seventh meeting
          of the Sub-Group, as contained in **Appendix A** to this paper;

   c)   approve the future work programme of the ATS/AIS/SAR Sub-Group at
          Appendix B.

**Note: Appendices B, C, D, E, F, G, H, I, J, K, L and M appear at the Attachment to
this working paper, they have been extracted from the Report of the Seventh Meeting of
the ATS/AIS/SAR/SG/7.**

List of draft conclusions and draft decision of the ATS/AIS/SAR/SG/7
(Nairobi 14 – 18 October 2002)

Number	Title

Draft Conclusion 7/1	**Agenda Item 2:** **Review of ATS Route Network**
	
	Amendment to AFI ANP Table ATS – 1
	
	That the ICAO AFI ANP Table ATS-1 be amended to include a requirement for ATS routes:
	
	    (i) Geneina -Port Sudan (RNAV).
	    (ii) Cotonou – Malabo

Draft Conclusion 7/2	**Implementation of the non-implemented routes including RNAV routes** **That:** a) the new target dates for the implementation of the non-implemented routes including RNAV routes at **Appendix B** should be the AIRAC date of **22 January 2004.** b) States that have not yet done so, expedite the implementation of ATS routes in their FIR as shown in **Appendix B** to this report.
Draft Conclusion 7/3	**Update of notes in Table ATS – 1 of the AFI Air Navigation Plan** That the notes on ATS routes in Table ATS – 1 of ICAO AFI Air Navigation Plan (Doc.7474) be updated as shown in **Appendix C** to this report.
Draft Conclusion 7/4	**Agenda Item 3:** **Review of the implementation of the Area Control Service** **Implementation of ATC Service** That States which have not yet done so, implement ATC service along all ATS routes contained in Table ATS 1 of the AFI Plan (Doc.7474) as soon as possible, but in any case not later than **31 December 2003** in the spirit of AFI/7 Rec.5/21.

Number	Title
Draft Conclusion 7/5	**Agenda Item 4: Review of the implementation of ATS Direct Speech (ATS/DS) circuits** **Amendment Proposal to the AFI ATS/DS Plan** **That:** **a)** South Africa initiates an amendment proposal to the ICAO AFI ANP to include the new FIRs in South Africa. **b)** In view of the restructured FIRs of South Africa, the State develop appropriate ATS/DS circuits required so that ICAO could develop an appropriate ATS/DS Plan.
Draft Conclusion 7/6	**Additional ATS D/S Circuits** That the ATS D/S plan be amended so as to include the circuit **Lagos-Niamey**.
Draft Conclusion 7/7	**Agenda Item 5: Review of the report of the first meeting of RVSM/RNAV/RNP Task Force** **RVSM monitoring agency for AFI Region** **That:** **a)** The task of monitoring safety in conjunction with implementation of RVSM and RNAV/RNP in the AFI Region be assigned to the South Atlantic Monitoring Agency (SATMA) located at Canarias ACC. **b)** The Terms of Reference of the monitoring agency be those at **Appendix D**
Draft Conclusion 7/8	**RVSM/RNP Safety Assessment** **That**: a) the safety assessment comparative methodology contained in Manual of Airspace Planning Methodology for the Determination of Separation Minima (Doc.9689) be used for application in the implementation of RVSM and RNP in the AFI Region. b) ICAO in coordination with SATMA develop ways and means of carrying safety assessment as soon as possible.
Draft Conclusion 7/9	**Civil/military coordination** That in order to ensure the safe and coordinated implementation of RVSM in the AFI Region, States ensure that the military aviation authorities are fully involved in the planning and implementation process.

Number	Title
Draft Conclusion 7/10	**Nomination of an RVSM programme manager** **That:** **a)** States/service providers nominate as soon as possible an RVSM Programme Manager who will be responsible for ensuring that the proper mechanism is put in place for the safe implementation of RVSM programme and will also act as the focal point of contact person. **b)** ICAO consolidate the list of the RVSM programme managers as soon as possible and circulate it to States and International Organizations.

Draft Conclusion 7/11	**Reporting of data for monitoring and/or carrying out safety assessment**
	
	That:
	
	a) All States institute procedures for reporting of data, incidents and conditions necessary or performing the collision risk calculations prerequisite for RVSM implementation to the AFI monitoring agency. The data will include, but not necessarily be limited to:
	
	    i) Height deviations of 300 ft or more.
	    ii) total number of IFR movements for each month.
	    iii) the average time per movement spent in the level band FL 290 to FL 410.
	    iv) ATC/ATC coordination failures
	    v) turbulence; and
	    vi) traffic data.
	
	b) The AFI monitoring agency shall ensure further processing and/or evaluation of this data within its Terms of Reference and identify or develop methodologies for assessing risk associated with traffic and conditions prevailing within the AFI Region.
	
	c) AFI monitoring agency should use the reporting format at **Appendix E**.

Draft Conclusion 7/12	**RVSM Monitoring requirements** That operators having met the monitoring requirements for a given fleet/type of aircraft, in other Regions will be accepted as having satisfied the RVSM monitoring requirements for the AFI Region.

Number	Title
Draft Conclusion 7/13	**Implementation of RVSM in the AFI Region** **That:** a) RVSM will be implemented in the AFI Region in the airspaces that have met the criteria in the RVSM Manual (Doc.9574) between FL 350 and FL390 initially on the AIRAC date of **27 November 2003** and extension from FL 290 to 410 inclusive by the year **2005**. b) Implementation of RVSM in the AFI Region be harmonized and coordinated with the implementation time frames of adjacent regions.
Draft Conclusion 7/14	**Training of all personnel involved with the implementation of RVSM in the AFI Region** **That**: a) ICAO and IATA explore the possibility of assisting States of the AFI Region through a Special Implementation Project (SIP) for training of personnel involved with the implementation of RVSM/RNP in the AFI Region. b) Seminars/Workshops be organized in the Region for training of air traffic services personnel in the RVSM/RNP field. c) States be invited to approach training institutions for the development of a training module in the RVSM field representative of the AFI Region. d) States having difficulties in complying with RVSM implementation programme, may either individually or in group explore the possibility of seeking outside expertise.
Draft Conclusion 7/15	**Guidance material for airworthiness and operational approval** That States in the AFI Region be urged to include in their national legislation and publish the Airworthiness and Operational Approval process for aircraft and operators intending to operate within a designated RVSM airspace based on provisions of ICAO Annex 6 Part 1 Chapter 7 para. 7.2.3, and the guidance material contained in both FAA interim guidance 91-RVSM and JAA Temporary Guidance Leaflet (TGL) N° 6.

Number	Title
Draft Conclusion 7/16	**Airworthiness and operational approval for RNP 5 and RNP 10 operation in the AFI Region** That with a view to facilitate and harmonize the airworthiness and operational approval procedures for RNP5 and RNP10 in the Region: (i) The European Joint Airworthiness Authority (JAA) temporary guidance leaflet N°.2, guidance material on airworthiness approval and operational criteria for the use of navigation systems in the European airspace designated for basic RNAV operations be endorsed as the official guidance material for airworthiness and operational approvals for RNP5 operations in the AFI Region. (ii) The guidance material developed by the United States, FAA order 8400.12 be used by States for the development of RNP10 operational approval process.
Draft Decision 7/17	**Sample AIC on Implementation of RVSM and National Legislation** That the RVSM/RNAV/RNP Task Force develop a) a sample AIC that shall be promulgated by States when notifying their intent to implement RVSM in national airspaces; b) a sample national legislation that shall be promulgated in States' AIPs on RVSM implementation.
Draft Conclusion 7/18	**Enforcement in national legislation** That States take the appropriate measure in order to: a) publish the AIC informing the users of their intention to implement RVSM between FL350 and FL390 on **27 November 2003** and; b) include the necessary provisions in their national legislation (AIPs). c) ICAO Regional Offices concerned circulate to States the Sample AIC and Sample National Legislation on RVSM.

Number	Title
Draft Conclusion 7/19	**Amendment to ICAO Doc.7030** That ICAO initiates as appropriate an amendment proposal to the AFI SUPPs to include relevant provisions for RVSM and RNP implementation in AFI Region.
Draft Conclusion 7/20	**Participation of representatives of States and international organizations involved in the implementation of RVSM approval process** That Representatives of States and international organizations with experience in the RVSM approval process of aircraft and operators, be invited to attend the future meetings of the RVSM Task Force.
Draft Conclusion 7/21	**Funding of the RVSM implementation programme** That National Governments, Regulatory bodies, operators, service providers and other stakeholders be granted budgetary allocations for acquisitions and other activities necessary for ensuring that all the requirements be met in a timely manner in order to safely implement RVSM in the AFI Region.
Draft Conclusion 7/22	**Guidance material for RVSM and RNAV/RNP** That in order to enhance awareness campaign on RVSM and RNAV/RNP the documents at **Appendix F** to this report be circulated to States.
Draft Conclusion 7/23	**AFI RVSM/RNAV/RNP implementation plan** That the material at **Appendix G** to this report be circulated to States for comments.
Draft Conclusion 7/24	**Future Work Programme of the RVSM/RNAV/RNP Task Force** That, having noted the RVSM/RNAV/RNP Task Force terms of reference, the Sub-Group formed the opinion that the Task Force should continue its work as assigned to it.
Draft Conclusion 7/25	**Agenda Item 6: Review of the report of the second meeting of the Airspace Management Task Force** **Categorization of Terminal Areas and Aerodromes** **That:** a) States which have not yet done so be reminded to provide the Secretariat with traffic data required for the categorization of TMAs and aerodromes;

Number	Title
	b) IATA and ASECNA should finalize the categorization of TMAs and aerodromes based on traffic data available and present it at the next CNS/ATM/IC -SG Meeting.
Draft Conclusion 7/26	**Implementation of RNAV Route UM114** That: a) Accra ATS authority implement and delegate to Kano/Lagos ATS authorities the portion of UM114 within its airspace. **b)** ICAO arrange at the earliest possible date, a co-ordination meeting between Accra, Kano and Niamey FIRs, preferably before the implementation of UM114.
Draft Conclusion 7/27	**Delineation of FIR Boundaries** That ICAO convene a meeting between Algeria and Tunisia to harmonize the publication in their respective AIPs of the delineation of the FIR boundaries pursuant to AFI/7 Rec 5/1, Rec 5/9 and APIRG/13 Conc. 13/26.
Draft Conclusion 7/28	**Globalization of FIRs in the AFI Region** That to achieve globalization of FIRs in the AFI Region pursuant to AFI/7 Rec.5/1 relative to a co-operative approach to airspace management, the concerned States explore the possibility of forming functional groups of FIRs such as: Ghana/Nigeria Namibia/Botswana South Africa/Lesotho/Swaziland Zambia/Zimbabwe Mozambique/Malawi Indian Ocean States (Madagascar, Mauritius, Seychelles) Kenya/Tanzania/Uganda Ethiopia/Eritrea/Djibouti
Draft Conclusion 7/29	**Review of AFI ATS incidents** **That :** a) Efforts to enhance Controller training, proficiency and work environment and ATS Staff Management continue throughout the Region. b) Dakar Oceanic, Kano (Lagos), Khartoum, Kinshasa, Tripoli, Luanda and Niamey FIRs continue to improve Staff training.

Number	Title
	c) For better assessment of the situation, joint ICAO/IATA technical missions including other Organizations to the ATS units where the highest number of incidents have occurred be encouraged. d) States and ATS providers (Angola, Democratic Rep. of the Congo, Libya, Sudan, ASECNA) expedite extension of VHF coverage to ATS routes in the upper airspace , and provision of ATC service in the region. e) Action be taken by all States to fully implement/improve ATS/DS links, especially between N'Djamena -Tripoli, N'Djamena-Khartoum, Accra-Lagos and Niamey-Accra. f) States establish and periodically update ATS Co-ordination procedures between all adjacent ATS units g) States, which have not already done so, be urged by ICAO to implement procedures for the timely investigation of ATS incidents and notification of the results in accordance with AFI/7 Rec.5/26. h) States, which have not already done so, implement voluntary non punitive ATS incident reporting procedures;
Draft Conclusion 7/30	**Amendments to the assignment of 5-letter name codes at crossing points of ATS Routes** That States concerned assign 5 letter names codes at crossing points of ATS routes as shown in **Appendix I.**
Draft Conclusion 7/31	**Publication of the air to air communications channel on 123.45 MHz** That States which have not yet done so, publish in their regulations and AIPs, the air to air VHF communication frequency 123.45MHz in accordance with ICAO Annex, 10 Vol.V paragraph 4.1.3.2 and the AFI VHF utilization Plan**.**
Draft Conclusion 7/32	**Application of flexible use of airspace (FUA)** **That:** a) States adopt a flexible use of airspace approach in the establishment of prohibited, restricted or danger areas such that these areas are established on temporary basis taking into account the needs of civil aviation; and b) States constantly review the existence of prohibited, restricted or danger areas pursuant to LIM/AFI (1988) Rec.2/21 as shown in **Appendix J.**

Number	Title
Draft Conclusion 7/33	**Implementation of 10-minute longitudinal separation minimum** **That:** a) States that have not already done so, urgently implement the 10-minute longitudinal separation minimum taking into cognisance the relevant requirements in APIRG/13 Conc.13/43 and the provisions of ICAO PANS/ATM (Doc.4444/501) and AFI CNS/ATM System Plan (Doc.003). b) Algeria and ASECNA implement a common 10-minute longitudinal separation minimum in selected airspaces so as to avoid confusion. c) ICAO editorially amend Doc.7030 to harmonize with the provision in the PANS/ATM Manual Doc.4444/501.
Draft Conclusion 7/34	**Development of Chart ATM 1 (Part V-ATM of the AFI FASID)** That the SSR Code Allotment Plan (Chart ATM 1 for Part V-ATM FASID) as contained in **Appendix K** be submitted to States for comments and subsequently be presented to theAPIRG/14 meeting for consideration.
Draft Conclusion 7/35	**Application of SIDs and STARs** That States implement the application of flexible use of airspace in establishing SIDs and STARs considering the following: a) As the period immediately after take off is one of high cockpit workload, the first significant point of a standard instrument departure route which requires reference to a radio navigation facility should, if possible, be established at a distance of at least 2 nautical miles from the end of the runway. b) Level restrictions, if any, be expressed in terms of minimum and/or maximum levels at which significant points are to be crossed; c) The designation of significant points as reporting points (compulsory or on request) be kept to a minimum;

Number	Title
	d) Standard instrument departure (SIDs) and arrival routes (STARs) be established in consultation with the users and other parties concerned.
Draft Conclusion 7/36	**Implementation of SIDs and STARs coupled to RNAV Route structure** That States implement SIDs and STARs coupled to RNAV Route structure where required, in order to relieve congestion on existing single routes.
Draft Conclusion 7/37	**Classification of airspaces :** **That:** a) ICAO expedites the revision of the current airspace classification taking into account the fact that there is no class for uncontrolled airspace which does not accept VFR; b) In the meantime airspaces which do not accept VFR (Oceanic, above FL145) be classified A in order to comply with Annex 11 and Doc.7030. c) In the meantime in case for one or another reason an airspace which does not accept VFR cannot be of class A, a NOTAM be published that the States concerned shall inform of the non acceptance of VFR in such an airspace.
Draft Conclusion 7/38	**Agenda Item 7: Review of the report of the second meeting of the AIS/MAP Automation Task Force** **Collection of Data for the Identification of National AIS Centers (NASCs) in AFI Region** **That:** a) the data collected be used to determine future regional AIS Centres (RASCs); b) States should concentrate their efforts in implementing their National AIS Centers (NASC) and those which have not completed the AIS questionnaire do so as soon as possible for submission of the replies to the relevant ICAO Regional Offices.
Draft Conclusion 7/39	**Production of the AIP in the ICAO format** That ICAO initiate a Special Implementation Project (SIP) to assist those States which have no AIP or have not published the AIP in the new format.

Number	Title
Draft Conclusion 7/40	**Dissemination of AIS data** That in the spirit of APIRG Conclusion 13/48, States which have not done so, establish a civil aviation website and ensure that AIS data are posted in the relevant website taking into account integrity and security of the information.
Draft Conclusion 7/41	**Publication of AIS Checklist and Summaries** a) That NOTAM checklist for each month be published on the first day of the following month and that current NOTAMs should be listed by serial number and date to facilitate identification. b) That NOTAM checklist refer to the latest AIP Amendments, AIP Supplements and the internationally distributed AICs. c)That the printed plain-language summary of NOTAMs in force, including references to the latest AIP Amendments, checklists of AIP Supplements and AICs issued be prepared every month and forwarded by the most expeditious means to all recipients of the Integrated Aeronautical Information Package.
Draft Conclusion 7/42	**Aerodrome AIS Units Implementation** That States ensure that the AIS Aerodrome units at **Appendices L** and **M** to this report are established and manned by qualified AIS personnel.
Draft Conclusion 7/43	**Quality and Status of AIS Personnel** That States take the necessary action to ensure that: a) AIS is accorded a status commensurate with the current technological developments requiring high calibre and skilled personnel; b) Personnel recruited for AIS receive adequate professional training; c) Such personnel are accorded a status comparable to that of personnel of other air navigation services; d) Adequate facilities and funds needed for the efficient performance of AIS duties and priorities are provided.

Number	Title
Draft Conclusion 7/44	**Training Guidelines for AIS Personnel** That ICAO expedite the publication of the revised Training Manual (Doc.7192), Part E – 3 as recommended by the AIS/MAP Divisional Meeting in 1998 (Doc.9733), so as to facilitate the introduction of the basic requirements for States to consider the licensing issue of their AIS personnel.
Draft Conclusion 7/45	**Membership of the AIS/MAP Automation Task Force** That Kenya, Nigeria, South Africa, Tanzania and Zimbabwe be included in the list of the AIS/MAP Automation Task Force members.
Draft Conclusion 7/46	**Continuity of AIS/MAP Task Force** That the AIS/MAP Automation Task Force continue its work programme in order to address uncompleted tasks as assigned by APIRG.
Draft Conclusion 7/47	**Agenda Item 8:Review of the implementation of ICAO requirements for NOTAM, WGS-84 coordinates and mandatory charts** **Conversion of en-route geographical coordinates** **That:** a)States which have not done so, complete the required conversion to WGS-84 of their en-route and FIR boundary reporting points coordinates; b)ICAO assist States concerned as necessary, in respect of a) above.

Number	Title
Draft Conclusion 7/48	**Publication of WGS-84 Information on Charts** That States give high priority to the promulgation of WGS-84 coordinates on the following mandatory charts: a)Instrument Approach Chart – ICAO; b)Aerodrome Obstacle Chart – ICAO Type A; c)Aerodrome Chart – ICAO; d)Precision Approach Terrain Chart – ICAO for Categories II and III, where applicable.
Draft Conclusion 7/49	**Responsibility for the Production of the World Aeronautical Chart – ICAO 1:1 000 000** **a)**That awareness of States concerned be brought to the fact that those States which had the responsibility for the production of the following sheets of the world aeronautical chart - ICAO 1: 1 000 000 are no longer in a position to continue their production: 2344-45, 2420-21, 2422, 2451, 2454-55, 2536-37, 2423, 2454-55, 2536-37, 2570, 2574, 2658, 2659-60, 2660, 2662, 2663, 2664, 2691, 2692, 2693, 2694, 2695, 2696-97, 2697, 2780-81, 2781-82, 2784-85, 2785-86, 2812-13, 2813-14, 2814-15, 2816-17, 2817-18, 2905, 2906-07, 2935, 2936, 3052, 3155-56, 3173-74, 3278, 3297. b)That States covered by the above-mentioned WAC sheets and which are unable to produce their sheet initiate consultations with other States having the capability to produce charts 1:1000 000 for assistance in this respect.
Draft Conclusion 7/50	**Agenda Item 9:Review of the implementation of ICAO requirements in the Search and Rescue (SAR) Services field** **SAR Cooperation Agreements between States** That in order to promote a more effective and economic utilization of SAR facilities, States should enter into precise agreements with other States in order to pool their resources and provide mutual assistance in SAR operations, using the specimen agreement in the IAMSAR Manual (Doc.9731), Volume One, Appendix I.

Number	Title
Draft Conclusion 7/51	**Implementation of SAR Legislation** That, as a matter of priority, States undertake to: a) enact the SAR legislation that will make SAR operations legal and empower the SAR mission coordinator to request external assistance when the available facilities and personnel are found not to be coping with an emergency or are viewed impaired or insufficient to cope with a distress situation. b) make sure that the request referred to in a) is not subjected to any approval by high level authorities, but that a notification should be sufficient.
Draft Conclusion 7/52	**AFCAC Project on Search and Rescue** That, considering the long-time problems which have continued to prevent the implementation of the ICAO provisions in the field of search and rescue, States be urged to express support to the AFCAC project aimed at expediting implementation of the ICAO SAR provisions, with particular emphasis to SAR legislation, organization and agreements.
Draft Conclusion 7/53	**Agenda Item 10:Consideration of the operational implications of the introduction of ICAO CNS/ATM System in the AFI Region** **Implementation of CNS/ATM Systems in Routing areas AR1 and AR6** That, the implementation of CNS/ATM systems within areas of routing AR1 and AR6 be coordinated by the SAT Informal Group.
Draft Conclusion 7/54	**Coordination between SAT Group and the AEFMP Group (Algeria, France, Spain, Morocco and Portugal)** That, a)in the implementation of CNS/ATM systems, close coordination be maintained between the SAT group and the AEFMP group; and b)attendance at each other's meetings be encouraged and whenever possible reports from each other's group meeting be exchanged.

Number	Title
Draft Conclusion 7/55	**Review of areas of routing in the AFI Region** That a review be conducted by the CNS/ATM/IC/SG in order to determine whether the 10 areas of routing adequately respond to the present traffic flows.
Draft Conclusion 7/56	**CNS/ATM Planning Target Dates** That the CNS/ATM Sub-Group develop CNS/ATM planning targets dates for the period 2005 onwards.
Draft Conclusion 7/57	**Agenda Item 11: Consideration of specific air navigation planning and implementation problems and the review of air navigation deficiencies in the Region** **List of deficiencies in the ATM, SAR and AIS fields** That considering the negative impact of non implementation of the air navigation plan requirements and the persistence of serious cases of deficiencies in several parts of the AFI region: a) States concerned should take as soon as possible concrete measures to eliminate all deficiencies at **Appendix N** to this report. b) the matter be regularly followed up by the ICAO regional offices; and c) results be brought to the attention of APIRG.
Draft Conclusion 7/58	**Agenda Item 12: Review of outstanding conclusions and decisions of APIRG, Decisions of the ATS/SG/7 and its future work programme** **Carriage and Operation of Airborne Collision Avoidance System (ACAS) and Pressure-Altitude Reporting Transponders** That States which have not done so, expedite the implementation of mandatory carriage and operation of ACAS II and carriage and operation of pressure-altitude reporting transponders by aircraft in the spirit of ICAO Annex 6, Part I paragraph 6.18 and Annex 10 Vol. IV and Doc. 8168 Annex 6, Part I paragraph 6.19, Annex 6, Part II paragraph 6.13.1, Annex 10 Vol. IV, Doc. 8168 Volume I, Part VIII and PANS/ATM, Doc.4444 Chapter 8, paragraph 8.5.

Number	Title
Draft Conclusion 7/59	**Agenda Item 13: Any Other Business** **Membership to the ATS/AIS/SAR Sub-Group** That Ghana and Zimbabwe be considered as additional members of the ATS/AIS/SAR Sub-Group.
Draft Conclusion 7/60	**ATS Contingency Planning** That the non-availability of ATS contingency plans in States be included in the APIRG list of deficiencies in the ATM field.
Draft Conclusion 7/61	**Reporting and analysis of ATS incidents** That in compliance with Assembly resolution A31-10, the provisions in the ICAO Annex 13, paragraph 7.3 and the AFI/7 Recommendation 5/26 States establish reporting systems which should be non-punitive and educational in order to capture the maximum number of incident reports.
Draft Conclusion 7/62	**ATS Operational Auditing and Proficiency Maintenance** That, in the spirit of AFI/7 conclusion 5/27, the lack of standard auditing and proficiency maintenance procedures in ATS units of States be included in the APIRG list of deficiencies relating to the ATM field.

**TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION
OF THE ATS/AIS/SAR SUB-GROUP**

1. **Terms of reference**

   a) To identify, State by State, those specific deficiencies and problems that constitute major obstacles to the provision of efficient air traffic management, aeronautical information services and search and rescue services and recommend specific measures to eliminate them.

   b) To keep under review the adequacy of requirements in the Air Traffic Management, Aeronautical Information Services and Search and Rescue fields, taking into account, *inter alia*, changes to aircraft operations and new operational requirements or technological developments.

2. **Work programme**

No.	Task description	Priority	Target date
1	Analyse the operational implications relating to the implementation of ICAO CNS/ATM systems in the fields of ATS, SAR and AIS/MAP and propose any required actions with a view to ensuring their smooth integration in the operational environment.	A	continuing
2	Taking into account human factors, study problems and make specific recommendations related to ATS and AIS personnel, with a view to ensuring the best services to users. (AFI/7 Rec. 14/7)	A	continuing
3	Study the requirements for civil/military coordination procedures, including the promotion of the implementation of the concepts of joint use of airspace, free flight, flexible tracks, etc. and consider reducing and/or eliminating prohibited, restricted and danger areas. (AFI/7 Rec. 5/3)	A	APIRG/15
*4	Determine the framework within which air traffic data collection statistical analysis and forecasting should be carried out.	C	continuing
5	Review the requirements and monitor the programme of implementation of area control service. (AFI/7 Rec. 5/21)	A	APIRG/15
6	Review the existing ATS route network (including RNAV routes) on a systematic basis with a view to achieving an optimum flow of air traffic while keeping flight distances of individual flights to a minimum. (AFI/7 Rec. 5/8)	A	APIRG/15
7	Consider problems and make specific recommendations relating to ATS interface routes with other regions.	A	Continuing

No.	Task description	Priority	Target date
8	Monitor achievements and progress in the implementation of RVSM/RNAV/RNP, RSP and RTSP in the AFI Region and provide recommendations in the light of acquired experience.	A	Continuing
9	Monitor developments in SSR planning criteria and review the allocation of SSR codes in the region to ensure there is no duplication with adjacent regions. (AFI/7 Rec. 5/20)	A	Continuing
10	Review the ATS requirements for navigation. (AFI/7 Rec. 10/4)	A	APIRG/15
11	Review of ATS requirements for communication including extension of VHF coverage. (AFI/7 Rec. 5/13, Rec. 5/12 and LIM AFI Rec. 10/36)	A	APIRG/15
12	Identify the ATS requirements for surveillance (RADAR, ADS, voice etc.) (AFI/7 Rec. 11/1)	A	APIRG/15
13	Carry out studies and develop recommendations aimed at facilitating in an effective way the existing contingency plans, reduce air traffic incidents, implementation of ACAS, ATIS, pressure-altitude reporting transponders, digital flight information service (D-FIS), RVSM, MSAW/CFIT, COSPAS/SARSAT and safety oversight programs in the AFI Region.	A	Continuing
14	Monitor the implementation of uniform ATS operational auditing and proficiency maintenance. (AFI/7 Conc 5/27)	B	Continuing
15	Review the requirements and monitor the implementation of search and rescue services.	B	Continuing
16	Review the requirements and monitor the implementation of AIS and MAP services, including AIS automation.	A	Continuing
17	Analyse, review and monitor shortcomings and deficiencies in the fields of ATS, AIS/MAP and SAR.	A	Continuing
18	Develop guidance material for the reporting and investigation of air traffic incidents in the AFI Region, taking into account material developed by other organizations such as the European Commission, EUROCONTROL, FAA, etc.	A	Continuing
19	Develop a standard criteria for the determination of new ATS route requirements to be included in the ICAO AFI Air Navigation Plan	A	Continuing

Priority:

A   High priority tasks, on which work should be speeded up;

B   Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

C   Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.

          * This task will be a subject of coordination with the Traffic Forecasting Task Force.

3.   **Composition:**

          Algeria, Burkina Faso, Cameroon, Congo, Congo (DRC), Côte d'Ivoire, Egypt, Equatorial Guinea, Eritrea, Ethiopia, France, Gabon, Ghana, Guinea, Kenya, Madagascar, Malawi, Mauritania, Morocco, Niger, Nigeria, Senegal, Spain, South Africa, Sudan, Tanzania, Togo, Tunisia, Zambia, Zimbabwe, ASECNA, IATA and IFATCA.

ATTACHMENT TO WP/6

(EXTRACT FROM THE REPORT OF THE SEVENTH
MEETING OF THE ATS/AIS/SAR SUB-GROUP)

ATS Routes in the ICAO AFI ANP (Doc. 7474)
requiring implementation

Route Designator	Segment(s)	States	Observations/Remarks
UA293	Ibiza Tiaret	Algeria	Required northbound
UA411	Jerba Tripoli Benina	Libya	Implemented at variance with the Plan via: A411 - Jerba/Zawia/Tripoli/Misurata A411N - Jerba/TANLI/Mitiga/Misurata
UA617	Kinshasa Windhoek	D. R. Congo	
UA618	SAGBU Malakal	Sudan	
UA748	(GOZO) Tripoli Mizda	Libya	
UA861	Lagos Garoua	Nigeria Cameroon	
UB525	Addis Ababa Luxor	Sudan	
UB607	El Obeid Dongola Abu Simbel	Sudan	
UG207	Mogadishu Karachi	Somalia	
UG623	Annaba	Algeria	Segment of the route suspended since 1980 by Libya.
	Tebessa Ghadames	Libya	
UG855	Tripoli Ghadames B. Omar Driss	Libya	

Route Designator	Segment(s)	States	Observations/Remarks
UG864	Tunis Ghardaia Timimoun	Libya	
UG979	Bordj Omar Driss Bou Saada Zemmouri	Algeria	
UL612	Goma	D. R. Congo	Egypt can accept implementation via ATMUL New Valley/KATAB/DBA
	El Dhaba	Sudan Egypt	
UM114	Lagos	Nigeria	Implemented at variance with the Plan within Kano FIR. LITAK ($11^0$00'00"N – $003^0$24"05"E)
UM220	Lodwar		Implemented by Kenya on segment from AVAGI to Lodwar.
	Abu Simbel	Sudan	
UM665	Addis Ababa Merowe	Sudan	
UM731	MOLOM Saurimo Johannesburg	Angola Botswana D. R. Congo South Africa	
UM994	Beni Walid ORNAT	Libya	RNAV

Route Designator	Segment(s)	States	Observations/Remarks
UM998	(Martigues) BALEN Constantine B.O. Driss Tobuk ENBUT Maiduguri EBIMU Kinshasa	Nigeria Congo D. R.	RNAV Congo DR not implemented as RNAV between Kinshasa Luena-Maun-Gaborone implemented as UB733 Kinshasa -Gaborone
	Luena Maun Gaborone	Angola Botswana	
UM999	Casablanca Errachidia El Golea Zarzaitine Sebba Sarir New Valley Luxor Jeddah	Morocco Algeria Libya Egypt Sudan Saudi Arabia	RNAV
UR400	Abu Simbel Kassala	Sudan	
UR613	Pantelleria Lampedusa Tripoli	Libya	Implemented in Malta FIR via SARKI. Not implemented in Tripoli
UR780	Mogadishu Dire Dawa Asmara	Somalia Ethiopia Eritrea	
UR981	Casablanca Marraketch BULIS Gao	Morocco Algeria	Not implemented segment Casablanca/Gao

Route Designator	Segment(s)	States	Observations/Remarks
UR986	Tunis Ghadames In Amenas	Algeria Libya	Not implemented due to restriction by Libya
UR991	ILDIR BOPAN	Namibia	
UR995	Addis Ababa Merowe	Sudan	

Updated notes of Table ATS 1 of the ICAO AFI ANP (Doc 7474)
Notes mises à jour du Tableau ATS 1 du Plan de Navigation aérienne OACI (Doc 7474)

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
A293 Ibiza *---Note 4 (DA) Tiaret (5 (LE)	Ibiza UA293 KIRLA *---Note 4 (DA) Tiaret
A400	**UA400**
Abidjan Sao Tome Luanda Luena A400 Kaoma EVOLU 1543S 2638E Lusaka Chileka	Abidjan Sao Tome Luanda Luena *-----Note 1 (Luena-Lusaka) UA400 Kaoma EVOLU 1543S 2638E Lusaka Antananarivo Moramanga Mauritius
A403	**UA403**
Tripoli *-----Note (HL) A403 Sebha N'Djamena Berberati Brazzaville	Tripoli *-----Note (HL) UA403 Sebha N'Djamena Berberati Brazzaville
A405	**UA405**
    Harare Masvingo A405 Greefswald Hartebeespoortdam Johannesburg	Hargeisa *Note 3 (HK) Nairobi Mbeya Harare *Note 1 (Harare-Greefswald) Masvingo UA405 Greefswald Hartebeespoortdam Johannesburg

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
A411	**UA411**
(NAT)	(NAT)
Rabat	Rabat
Fes	Fes
Oujda	Oujda
Oran	Oran
Cherchell	Cherchell
Alger	Alger
Bejaia	Bejaia
Annaba	Annaba
Tunis	Tunis
Monastir	Monastir
Jerba	Jerba
*-----Note (HL)	*-----Note (HL)
Tripoli	Tripoli
*-----Note (HL)	*Note (HL)
Beni-Walid	Beni-Walid
Benina	Beni-Walid
GARFE 3236N 2401E	Benina
	GARFE 3236N 24012E
	*-----Note 2 (HE and HL)
Mersa-Matruh	Mersa-Matruh
*-----Note 3 (HE)	*-----Note 3 (HE and HL)
Cairo	Cairo
Sharm El-Sheikh	Sharm El-Sheikh
(Wejh)	(Wejh)
A607	**UA607**
Ghadames	Ghadames
*-----Notes 2 (HL) (DA)	*-----Notes 2 (HL) (DA)
A607 Dirkou	UA607 Dirkou
N'Djamena	N'Djamena
Bangui	Bangui
	Lubumbashi
	UA608
	El Bayadh
	*-----Notes 2 (DA)
	UA608 Niamey
	Cotonou
	UA615
	Zemmouri
	UA615 Ghardaia
	Tamanrasset
	Kano
A619	**UA619**
Paleohora)	Paleohora)
METRU	METRU
Alexandria	Alexandria
A619 Cairo	UA619 Cairo
*-----Note 3 (HE	*-----Note 3 (HE
Ras Sudr 2936N 3241E	Ras Sudr 2936N 3241E

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
*-----Note 3 (HE) METSA 2924N 3458E (Hail)	*-----Note 3 (HE) METSA 2924N 3458E (Hail)
A727	**UA727**
(Sitia) PAXIS Alexandria Cairo Luxor A727 Abu Simbel Merowe *-----Note 3 (HS) Khartoum *-----Note 3 (HS) Kenana Lodwar *-----Note 4 (HK) Nairobi	(Sitia) PAXIS Alexandria Cairo Luxor UA727 Abu Simbel Merowe *-----Note 3 (HS) Khartoum Kenana Lodwar *-----Note 4 (HK) Nairobi Kilimanjaro
A741	**UA741**
(Palermo) A741 *-----Note 2 (HL) Tripoli	(Palermo) UA741 *-----Note 2 (HL) Tripoli
A748	**UA748**
Gozo A748 *-----Note 2 (HL) Tripoli	Gozo UA748 *-----Note 2 (HL) Tripoli
A850	**UA850**
A850 OTARO 3900N 0441E Zemmouri	(Nice) *-----Note 5 (LF) UA850OTARO 3900N 0441E Zemmouri
	UA854
	(Palma) *----Note 2 (LE) UA854SADAF 3748N 0220E *-----Note 2 (DA) Cherchell
A856	**UA856**
(Alicante) *-----Notes 2 (LE, DA), 3(LE) A856 Alger Constantine Tebessa Jerba	(Alicante) *-----Notes 2 (LE, DA), 3(LE) UA856Alger Constantine Tebessa Jerba

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
A865 Menorca *-----Note 2 (DA)	Menorca UA865 *----Note 2 (LE) RANKA *---Note 2 (DA)
Cherchell UB525 Addis Ababa:Luxor add Note 3 (HA)	Cherchell
B607	**UB607**
(Sitia) TANSA El Daba B607 New-Valley Abu Simbel	(Sitia) TANSA El Daba UB607 New-Valley Abu Simbel Dongola *-----Note 3 (HS) EL Obeid Goma
	UB738
	UB738 (Malaga) *---Note 5 (LE) *---Note 1 (Malaga-El Bayadh) LIGUM 3550N 00200W Hamman Bou Hadjar El Bayadh
G623	**UG623**
(BALEN 4057N 0541E) *----NOTE (LF) G623 Annaba Tebessa Ghadames	(BALEN 4057N 0541E) SALMA 39N 00643E UG623 Annaba *----Note 4 Tebessa *----Note 3 (HL) Ghadames
G652	**UG652**
Brazzaville Kinshasa Saurimo Lusaka Harare	Brazzaville Kinshasa Saurimo *-----Note 1 (Saurimo-Lusaka) G652 NIDOS 1304S 2651E NIDOS 1304S 2651E UG652 Lusaka Harare Beira (Perth)

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
G659	**UG659**
Beni Walid	Ben Walid
*-----Note (HL)	*-----Note (HL)
Sarir	Sarir
G731	**UG731**
(Alghero)	**(Alghero)**
*-----Note 2 (LF)	
Zemmouri	Zemmouri
G731 *-----Note 4 (DA)	UG731 *-----Note 4 (DA)
Tiaret	Tiaret
El Bayadh	El Bayadh
Timimoun	Timimoun
	Atar
G855	**UG855**
G855 Tripoli	Tripoli
*-----Note (HL)	*-----Note (HL)
Ghadames	*-----Notes (HL), 4 (DA)
	UG855 Bordj Omar Driss
	Tamanrasset
	Niamey
	Tamale
	Abidjan
	UG853
	Las Palmas/Gran Canaria
	*-----Note (GC)
	AMDIB 2055N 1800W
	TITOR 1300N 1800W
	DEMAR 0539N 1100W
	DEVLI 0400N 0730W
	Luanda
	Kuito
	UG853 Cuito Cuanavale
	Maun
	Hartebeespoortdam
	Johannesburg
	UG864
	UG864 Tunis
	Tebessa
	Ghardaia
	Timimoun
R611	**UR611**
(Caraffa)	(Caraffa)
Benina	Benina
R611 Merowe	UR611 Merowe
Khartoum	Khartoum
Addis Ababa	Lake Awasa
	Mombasa

Lower ATS routes Routes ATS inferieures Rutas ATS inferiores	Upper ATS routes Routes ATS superieurs Rutas ATS superiores
R616	**UR616**
(Pantelleria) R616 Lampedusa *---Note (HL) Tripoli	(Pantelleria) UR616 Lampedusa *---Note (HL) Tripoli
	UR400
	Abu Simbel *-----Note 2 (HS) UG400 Kassala Bahr-Dar Addis Ababa Mogadishu Praslin Mauritius
R981	**UR981**
	Casablanca *-----Note 2 (DA, DR, GA)
R981 Gao Niamey Lagos	UR981 Gao Niamey Lagos
R986	**UR986**
Tunis *-----Note 2 (HL) R986 Ghadames *---Note 2(DT) In Amenas Djanet Kano	Tunis *-----Note 2 (HL) UR986 Ghadames *---Note 2(DT) In Amenas Djanet Kano Foumban Franceville

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TERMS OF REFERENCE OF AFI RVSM MONITORING AGENCY

The AFI Monitoring Agency for RVSM implementation has the following Terms of Reference:-

a)   to establish and maintain a central registry of State RVSM/RNP approvals of operators and aircraft using the AFI Region airspace where RVSM will be applied;

b)   to facilitate the transfer of approval data to and from other RVSM regional monitoring agencies;

c)   to establish and maintain a data base containing the results of height-keeping performance monitoring and all altitude deviations of 300 ft or more within AFI Region airspace, and to include in the database the result of AFI Monitoring Agency requests to operators and States for information explaining the causes of observed large height deviations;

d)   provide timely information on changes of monitoring status of aircraft type classifications to State authorities and operators;

e)   to assume overall responsibility for:

   i)   coordination of the Global Positioning System Monitoring System (GMS); and
   ii)   assessing compliance of operators and aircraft with RVSM height-keeping performance in conjunction with RVSM introduction in the AFI Region;

f)   to provide the means of identifying non-RVSM approved using AFI airspace where RVSM is applied; and notifying the appropriate State approval authority; and

g)   to conduct readiness assessments and safety assessments as an aid for the RVSM/RNAV/RNP Task Force for decision making in preparation for RVSM implementation on a specified date.

h)   to establish and maintain a data base containing the results of navigation error monitoring;

i)   to prepare, each six months, reports setting out the results of navigation error monitoring for the preceding six-month period. These reports shall be presented to the ICAO ESAF Regional Office, Nairobi and States as part of their decision process related to safety management;

j)   to conduct safety assessments as an aid for the RVSM/RNAV/RNP Force for decision making in conjunction with expansion or changes to the RNP route structure within the AFI Region;

k)   to liaise with other Regional monitoring agencies and organizations to harmonize RNP implementation and upgrading.

AFI RVSM Monitoring Agency – Reporting Format

NAVIGATION DEVIATION INVESTIGATION FORM				
Type of Report: PILOT – Flight CONTROLLER – ATC Unit				
Date/Time (UTC):	Type of Deviation: VERTICAL Type (A to O) (*) LATERAL Type (A to G)			
Causes: WEATHER (See 2-G) OTHERS (Specify)				
Conflict Alert Systems:				

DETAILS OF AIRCRAFT	First Aircraft		Second Aircraft (for vertical)	
Aircraft Identification:				
Name of Owner/Operator:				
Aircraft Type:				
Departure Point:				
Destination:				
Route Segment:				
Flight Level:	Cleared	Actual	Cleared	Actual
Cleared Track:				
Extent of deviation - magnitude and direction: (NM for lateral; feet for vertical)				
Amount of time at incorrect Flight Level/Track:				
Position where deviation was observed: (BRG/DIST from fixed point or LAT/LONG)				

WAS ATC Clearance obtained: If ATC clearance NOT obtained
   YES   NO
                     WERE Contingency procedures followed: YES NO				

Action Taken by ATC/Pilot:				
Other comments:				

(*) See deviation classification

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NAVIGATION DEVIATION INVESTIGATION FORM

_ The ATCO/Pilot should fill as many items as possible.
_ Complementary data can be attached.

_ The notification of any deviation (vertical or lateral) has to be classified, when possible, according to the following types:

1.- For Large Height Deviations (vertical deviation)

    A – Contingency action due to engine fault
    B - Contingency action due to pressurisation failure
    C - Contingency action due to OTHER CAUSE
    D – Failure to climb/descend as cleared
    E – Climb/descend without ATC clearance
    F – Entry airspace at an incorrect level
    G – ATC FL re-clearance resulting in loss of lateral or longitudinal separation.
    H – Deviation due to TCAS
    I – Aircraft unable to maintain level
    O - Other

2.- For lateral deviations

    A – Committed by aircraft not certified for operation in the RNP airspace
    B – ATC system loop error
    C1 - Equipment control error including inadvertent waypoint error
    C2 – Waypoint insertion error due to the correct entry of incorrect position
    D – Other with failure notified to ATC in time for action
    E - Other with failure notified to ATC too late for action
    F - Other with failure notified/received by ATC
    G – Lateral deviations due to weather when unable to obtain prior ATC
            clearance

Note that there are data that have to be notified by the pilot.

Remarks:

1. As contingency procedures have to be followed, if a NO is included in "WERE the contingency Procedures followed", an explanation (WHY) have to be included in "Other comments"

2. The EUR/SAM corridor includes the FIR/UIRs: Recife (Atlantico), Dakar Oceanic, Sal Oceanic and Canarias (South and West).

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SATMA DEVIATIONS MONITORING REPORT

AREA CONCERNED :

ALTITUDE : **From FL 290 up TO FL 410 both included**

ACC/AO :

MONTH : **YEAR :**

☐ **(Number) Deviation Report Form attached (including TCAS RA and Airproxes)**

☐ **NO Deviations reported (mark with an X)**

The ACC/AO Responsible

Name :

Phone/E-mail :

Send to

SATMA – E-mail : **satma@aena.es**
                Fax :+34 928 57 7052

ACC's: To report monthly until further notice

AO's: To report monthly from April 1st 2003 until March 31st 2004

The activities undertaken by the SATMA are performed through the two components of the permanent structure:

- The SATMA coordinator who will be responsible for performing the functions assigned by the Agency and maintaining permanent communication with the representatives of the ACC's of the SAT Region.
- A Secretariat to facilitate the technical, operative and administrative tasks required by the Agency in order to follow the SATMA Coordinators' guidelines.

4.   SUBMISSION OF STATISTICAL AND EQUIPMENT DATA

4.1   States and Organizations concerned are requested to submit to the South Atlantic Monitoring Agency (SATMA) the necessary statistical data to assist in the timely completion of the safety analysis.

4.2   The Operators flying through the EUR/SAM corridor are requested to notify SATMA, in an independent stage of the state regulator authorities, the aircraft equipment certification on RVSM and RNP-10.

4.3   In order to arrange sufficient data for safety assessment and testing for the implementation of CNS/ATM systems, aircraft operators are requested to include all the navigation and communications system availability, including ADS and CPDLC capability, in the flight plans (box no.10).

4.4   The ACC's of the AFI Region and the aircraft operators are also requested to send to SATMA the "Navigational Deviation Investigation Form" at page 2 above.

5.   SATMA COOPERATIVE REQUEST

Any other cooperation in whatever way which may be required by the SATMA will ensure that all those tasks commissioned to SATMA by the corresponding ICAO forum may be duly performed.

6.   ADDITIONAL INFORMATION

The SATMA is located in the ACC-Canarias and can be reached at the following E-mail address:
satma@aena.es

The coordinator, Ramón Pérez Parada, can also be contacted by telephone and Fax:
Tel:34-928 577 057
Fax:34-928 577 003
The Secretariat, Tomás Vidriales Bartolomé can be contacted at:
Tel:34-928 557 054
Fax:34-928 577 052
A SATMA WEB page is also in progress and will be ready by January/February 2001.

RVSM Guidance Material

Documents	Explanation	Language	Web site / URL
Reference Documents			
Joint Aviation Authority (JAA) Temporary Guidance Leaflet (TGL N°6).	TGL N°6 Revision 1- Guidance material on the approval of aircraft and operators flight in airspace above flight level 290 where a 300m (1,000ft) vertical separation minimum is applied.	English	http://www.eur-rvsm.com/documents/TGL6rev1.pdf
FAA documents RVSM Approval Checklist - US Operators (01 May 02) RVSM Approval Checklist - Non-US Operators (01 May 02) Example Operator RVSM Application (17 Feb 99) Interim Guidance Material on the Approval of Operators/Aircraft for RVSM Operations 91-RVSM with Change 1 (30 June 99)(Complete RVSM Guidance Material with updated changes).	RVSM Aircraft and Operator Approval Documentation- documents and guidance related to RVSM aircraft and operator approval.	English	http://www.faa.gov/ats/ato/150_docs/91RVSM_CH1.doc
ICAO Doc 7030/4 Regional Supplementary Procedures amendment for EUR RVSM (requirements and procedures).	This Doc 7030/4 amendment was approved by the ICAO Council on 23 November 2000.	English	http://www.eur-rvsm.com/documents/ApprovedE99-33Doc7030amendment.pdf

Documents	Explanation	Language	Web site / URL
Master Plan-European Reduced Vertical Separation Minimum Programme	This EUR RVSM Master Plan has been endorsed in 1999 by all Programme participants. It describes the general programme history, organization, key dates and associated responsibilities.	English	http://www.eur-rvsm.com/documents/A041.pdf
ATC Manual for a Reduced Vertical Separation Minimum (RVSM) in Europe-Version 2.0.	Whilst the English version is the only official version, two language versions are also provided.	English French	http://www.eur-rvsm.com/documents/ATCManualV2_0.pdf
Safety			
EUR-RVSM Pre-Implementation Safety Case Edition 2.0 of 14 August 2001.	This document constitutes the EUROCONTROL Pre-Implementation Safety Case (PISC) for the RVSM Programme.	English	http://www.eur-rvsm.com/documents/safety/EURRVSMPISCV2014AUG2001.pdf
Functional Hazard Assessment Results of 12 February 2001.	This document contains the results of the Functional Hazard Assessment (FHA) for the EUR RVSM Programme conducted during the last quarter of 2000.	English	http://www.eur-rvsm.com/documents/safety/RVSMFHAV1012FEB2001.pdf
National Safety Plan	Guidance material to develop national safety plans.	English	http://www.eur-rvsm.com/documents/safety/GuidancetoStatesJune01.pdf
EUR RVSM Safety Policy Document	The Reduced Vertical Separation Minimum (RVSM) operational concept, sets out the Safety Policy European RVSM programme, lists the safety objectives and provides a high-level description of he deliverables of the RVSM Safety Sub-Programme.	English	http://www.eur-rvsm.com/documents/safety/A573SafetyPolicyDocV1_0.pdf

Documents	Explanation	Language	Web site / URL
Wake Vortices			
The Effect of RVSM on Wake Vortices.	EUROCONTROL has sponsored a Vortex Turbulence study into the effects RVSM would have on the occurrence of turbulence due to wake vortex encounters. From that page, the full report including programme response is also available for download, as well as the Wake Turbulence Report Form.	English	http://www.eur-rvsm.com/documents/WakeVortexAugust2001.pdf
RVSM Approval Requirements – Training			
Flight Crew Training and Associated RVSM Operational considerations	This brief provides guidance for RVSM operational considerations.	English	http://www.eur-rvsm.com/documents/RVSMFlightCrewtraining&operational considerations.pdf

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AFI RVSM/RNAV/RNP IMPLEMENTATION PLAN

ID	Description	Start	Finish	Status	Resources
1	Agree on structure of TF to enable efficient handling of specialist technical tasks				
2	Identify resources for performing specialist technical tasks				
3	Investigate methods of funding any outside assistance required				
	Safety Assessment and Monitoring				
4	Conduct preliminary data collection and readiness assessment				
5	Evaluate options for setting up a central monitoring agency				
6	Evaluate options for carrying out the safety analysis				
7	Evaluate options for implementation of a height monitoring program				

ID	Description	Start	Finish	Status	Resources
8	Develop procedures for reporting large height deviations in existing system				
9	Collect weather and turbulence data for analysis				
10	Develop detailed program for safety analysis				
11	Establish requirements for pre and post-implementation monitoring				
12	Undertake initial safety analysis				
13	Carry out pre-implementation safety analysis				
14	Carry out pre-implementation readiness assessment				
15	Carry out post-implementation safety analysis during verification phase				
16	Review of mathematical and statistical techniques to assure their appropriateness for AFI RVSM				

ID	Description	Start	Finish	Status	Resources
17	Ensure Transferability of aircraft data from other Regions				
18	Devise methodologies for incorporating the effects of projected traffic growth and system changes on occupancy & collision risk in the future environment				
19	Perform periodically other data collections (eg. ASE stability) in order to ensure that the parameter values used in the mathematical collision risk models remain current				
	ATC Operational Issues				
20	Determine the limits of RVSM airspace (geographic and vertical)				
21	Develop ATC operational policy & procedures for normal RVSM operations				
22	Identify transition areas and transition procedures				

ID	Description	Start	Finish	Status	Resources
23	States assess the impact of RVSM implementation on controller automation systems and plan for upgrades/modifications				
24	Develop ATC procedures for non-approved State act to transit RVSM airspace				
25	Develop procedures for handling non-compliant civil aircraft (inc ferry & maintenance)				
26	Develop procedures for suspension of RVSM				
27	Evaluate the need for simulations to assess ATC workload and possible need for airspace/air route/Sector changes				
28	Develop ATC regional training guidance material				
29	Identify issues to be addressed in Letters of Agreement				

ID	Description	Start	Finish	Status	Resources
30	States to conduct local RVSM training for air traffic controllers				
	OPS/AIR Issues				
31	States to examine existing legislation and regulations to identify any changes required for RVSM				
32	Develop and promulgate information on the operational approval process				
33	Develop procedures for aircraft found to be non-compliant through monitoring				
34	Evaluate the need for chart amendments related to RVSM				
35	Develop regional guidance on pilot and dispatcher training				
36	Examine issues related to the use of ACAS in RVSM airspace				
37	Monitor progress with operator approvals				

ID	Description	Start	Finish	Status	Resources
	Joint Tasks				
38	Review preliminary readiness assessment				
39	Set target proportion of RVSM approved aircraft for full RVSM implementation				
40	Set target AIRAC implementation date(AIP Supplement to be published)				
41	Prepare/maintain regional status report detailing RVSM implementation plans				
42	Identify major milestone and target dates				
43	Develop a regional RVSM informational campaign				
44	Develop regional RVSM Guidance Material				
45	Review weather and contingency procedures for applicability under RVSM				

ID	Description	Start	Finish	Status	Resources
46	Develop model AICs and NOTAMs				
47	Evaluate preliminary readiness and safety assessments				
48	Undertake coordination and harmonization of procedures with adjacent Regions				
49	Evaluate the need for tactical offset procedures to mitigate the effects of turbulence and TCAS alerts				
50	Develop Doc 7030 amendment				
51	Review aircraft altitude-keeping performance and operational errors				
52	Develop monitoring and evaluation program for the verification phase				
53	Evaluate final readiness assessment				
54	Evaluate final safety analysis				
55	Go/No-Go decision				

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REVISED TERMS OF REFERENCE AND WORK PROGRAMME OF THE AIRSPACE MANAGEMENT TASK FORCE (ASM/TF)

a)   **Terms of Reference**

To explore ways and means of finding operational solutions to some pressing problems affecting the safety of air navigation in the region and to propose remedial actions.

b)   **Work Programme**

i)   To review the existing ATS airspaces in the AFI Region (ATS routes, TMAs, Control Zones, etc...) and to identify significant enhancements that could be made to improve safety efficiency and to propose pragmatic operational solutions in this regard;

ii)   To study problems associated with the implementation of WGS-84 coordinates of reporting points, etc...)

iii)   To review the assignment of significant points which have not been assigned five-letter name-code designators, and identify any proposed changes as appropriate;

iv)   To identify hot spots and bottlenecks where significant ATS incidents have been reported and propose solutions;

v)   Review of prohibited, restricted and danger areas in the AFI Region;

vi)   Implementation of 10 minute longitudinal separation minimum in the AFI Region;

vii)   Development of chart ATM 1 on AFI participating areas for Part V-ATM of the AFI FASID;

viii)   Review of SIDs and STARs in the AFI Region.

AMENDMENT TO THE ASSIGNMENT OF 5 LETTER NAME-CODES
AT CROSSING POINTS OF ATS ROUTES

1.   **ACCRA FIR DGAA (Ghana)**

   a)   Make Accra TMA crossing points non-CRP's at FL 245 and above

   b)   Add names to all crossings on Direct route Tamale (TLE) - Gwasero (GW)

   c)   Add names to all crossings on Direct route Accra (ACC) - Gwasero (GW)

   d)   Add names to all crossings on ATS route Lomé (LM) - Niamtougou (NT)

   e)   Add names to all crossings on ATS route Lomé (LM) - Niamey (NY)

   f)   (Re) name all FIR/UIR boundary points created by Direct/ATS routings

   g)   Delete NANGA, TCP be BIGOM

2.   **ALGIERS FIR, DAAA**

   a)   Reroute UA 411 to cross UB 738 over HMB NDB, the straight to MOS VOR and delete ORA or name crossing

   b)   UA 411 with UB 738 and delete HMB NDB

   c)   Suggest to route UA 411 out of ALR VOR and not via BNA NDB, and name crossing with UB 726

   d)   On UA 31 out of ALR, name crossing with UB 726 and delete BNA as CRP

   e)   Add name to crossing UA 31 with UB 734 and delete BABOR

   f)   Add names to crossings UG 26 with UB 734, UV 508, UR 978, make these X-ings TCP's and delete BOURI

   g)   Add names to crossings UG 6 with UA 605, UG 14

   h)   Add name to crossing UG 14 with UR 34

   i)   Add names to crossings UA 411 with UR 978, UA 605, UG 14

   j)   Delete CHLAL as CRP on UB 726

   k)   Add names to crossings UR 985 with UG 859, UV 508, UG 864 and delete ZIBAN as CRP

   l)   Add names to crossings UG 864 with UV 508, UR 978, UA 605 and delete ROANE, NADJI, AMIRA, RADJA

   m)   Add name to crossing UA 605 with UV 71 and delete KRIMA

   n)   Add name to crossing UG 852 with UA/UM 614, delete RGN as CRP

   o)   Relocate RAHIL to crossing UG 852 and UM 608

   p)   Add name to crossing UM 608 and UB 727, make this crossing transfer of control Algiers/Niamey, delete RASIR, TERIN
   (State indicated that codes are used as TCPs and cannot be deleted)

q)   Add names to crossing UB 727 with UM 978 and UB 730 and delete TIDOU, HINAN,
      OUREL
      (State indicated that codes are used as TCPs and cannot be deleted)
r)   Delete ILZ on UB 727 as CRP
s)   Make Ghat transfer of control Algiers/Tripoli and delete TWARG, on route DJA-GHT
      (compare situation at IMN)
t)   Add names to crossing UM 608 with UR 990 and UG 864 and delete JOKKA, RIAME,
      MOUNA

3.   **ANTANANARIVO FIR, FMMM   (Madagascar)**
      Antananarivo FIR is managed by ASECNA

a)   Make EDAMA transfer of control point Beira/Antananarivo FIR's, delete EROPA,
      EGMAD
b)   Delete IXAGU on UB 536 as CRP
      *(Note : ASECNA indicated that IXAGU cannot be deleted as it is a TMA entry/exit
      point for Antananarivo, that above code is to be retained as TCP)*

c)   Delete TIKAN on UR 775F
       *(Note : ASECNA indicated that TIKAN will be used as on demand CRP while
      considering the airspace statute in this zone)*
d)   Add crossing UR 782F with UM 609 to Antananarivo FIR, name this crossing, delete
      ONIVE, ATOLA
       *(Note: ASECNA indicated that the deletion of ATOLA requires a preliminary
      coordination between the ATS Authority of FIRs Seychelles and Antananarivo).*
e)   Make ANVOR (X-ing UG 661 with UR 780F) transfer of control point with Saint Denis TMA,
      then delete UVENA and APLEM.
       *(Note: ASECNA indicated that the deletion of the UVENA point and APLEM requires a
      preliminary coordination between the responsible ATS of Saint-Denis TMA and of
      Antananarivo FIR).*
f)   Make KARAT (X-ing UA 665 with UR 401 transfer of control point with Mauritius FIR,
      delete AMBOD

g)   Delete APKOT on UA 609F
       *(ASECNA indicated that this point is used as TCP, its deletion requires a preliminary
      coordination between the responsible ATS of the Centers of Antananarivo, Saint-Denis
      and Mauritius)*
h)   Add name to crossing UA 400 with direct route Mahajanga VOR- Inhambene NDB
      (Jeppesen charts)
       *(ASECNA indicated that the new segment direct VOR Mahajanga–NDB Inhambene
      must be registered in the Table ATS 1 of the network of ATS routes)*
i)   Add name to crossing UA 401 with direct route Moroni VOR- RAKAT   (Jeppesen
      charts)
       *(ASECNA indicated that the new segment direct VOR Moroni–RAKAT should at first
      be registered in the Table ATS 1 of the network of ATS routes)*

j) Add name to crossing UG 661 with Direct route Moroni VOR- SOKAR (Jeppesen charts), and delete TABNO and make this X-ing TCP, or reroute direct route via TABNO
(ASECNA indicated that, for the first case, the new segment direct VOR Moroni– SOKAR should at first be registered in the Table ATS 1 of the network of ATS routes; in the second case, a coordination is necessary with the FIRs Seychelles and Dar Es Salaam for the harmonization of the TCP).

k) Reroute direct route DO NDB- MG VOR via NSB VOR, via ANDIL, and name crossing with UB 790
(ASECNA indicated that the new segment direct NDB DO - VOR MG via VOR NSB and ANDIL should firstly be registered in the Table ATS 1 of the network of ATS routes)

l) Add names to crossings Direct route NSB VOR- St Denis VOR with UB 459, UG 661, UR 348
(ASECNA indicated it would be preferable for this new segment, to be at first registered on the table ATS 1 of the network of ATS routes, and that its track passes via UVGET in order to decrease the creation of many CRPs)

4.   BAMAKO TMA (Mali)
The airspace of the TMA BAMAKO is managed by ASECNA

a) Airspace above FL 245 should be controlled from the ACC/FIC responsible for the FIR.
(ASECNA indicated that a relative to global survey of the reorganization of the airspace of the ASECNA region is ongoing)

b) Name or delete all current CRP's under "FIR" name only

5.   BRAZZAVILLE FIR, FCCC (Congo)
ASECNA is the agency managing the airspace

a) All upper airspace in Brazzaville FIR must be managed by Brazzaville ACC.
(ASECNA indicated that a relative global survey of the reorganization of the airspace of the ASECNA region is ongoing)

b) There must be only **one** direct ATS route between Douala and Yaounde.
(ASECNA noted the proposition)

c) Delete TI and VITLI as CRP on UR 984 or replace by one in the middle
(ASECNA noted the proposition, these points will be considered as « CRP non compulsory)

d) Add name to crossing route FL (N'Djamena)- IRO (DRC) with UA 410, with UG 655
(ASECNA indicated that the itinerary FL (N'Djamena)–IRO (DRC) should at first be registered in the Table ATS 1 of the network of ATS routes)

e) Delete MERON on UG 655 and UIR CRP at N 05.04.05/E 024.12.2
(ASECNA indicated that the coordinates of the new point(TCP) proposed will be verified)

f)   Add name to UIR boundary N 8 and E 020.04.0 and E 018.46.5
(ASECNA indicated that the creation of this point must be subject to a requirement of creation of ATS routes on the basis of a meaningful air traffic statistics. The creation of this point is on stand by)

g)   On route DLA-BT, add names to crossings with UR 986, UH 455, UG727
(ASECNA indicated that, considering the procedures of exploitation and the composition of the area circulation in the sector, the itinerary DLA–BT (BERBERATI) must to be used via VOR YD)

h)   Delete on same rout 2 TMA crossing CRP's

i)   Add name to crossing UH 455 with ATS route TJN-INASU-Kano
(ASECNA indicated that the creation of this new point requires a preliminary coordination with the responsible ATS of Kano on the necessity to establish the track of ATS route TJN-INASU-KANO with coordination of the two adjacent FIRs)

6.   CANARIAS FIR, GCCC

Whilst it is recognized that virtually all of the Canarias FIR is radar covered, it is still recommended that all airway crossings be given names. This is to allow aircraft data bases to have access to these names and thus provide an additional contingency redundancy, such as in case of radar outage. These named airway crossings can be made non-compulsory reporting points.

7.   CASABLANCA FIR, GMMM

a)   Whilst it is recognized that virtually all of the Casablanca FIR is radar covered, it is still recommended that all airway crossings be given names. This is to allow aircraft data bases to have access to these names and thus provide an additional contingency redundancy, such as in case of radar outage. These named airway crossings can be made non-compulsory reporting points
(State indicated that most of these requirements have been done but some are still remaining to be done)

8.   DAKAR FIR - Abidjan Sector, DIII (Côte d'Ivoire)
ASECNA is the agency managing the airspace.

a)   Delete ENERA on UA 560
(ASECNA noted this proposition, ENERA point could be used as "on demand CRP" and TESKI as TCP)

b)   When W1 is extended beyond SN (Accra FIR), two new crossings with UG 859 and UA 614/UM 104 are created.
(ASECNA noted the proposition that must first be approved for an insertion in the ICAO AFI Air Navigation Plan)

c)   Then delete MOLAB and GUPEX.
(The proposition has been noted by ASECNA, but the above codes are to be retained as TCPs at present)
d)   Suggest W 1 to connect at GUREL
(The proposition has been noted by ASECNA and awaits approval of the ICAO AFI Air Navigation Plan)

9.   DAKAR, FIR, GOOO (Senegal)
ASECNA is the agency managing the airspace

a)   The segment ARLEM-IPEKA on UA560 to be delegated to Dakar or Abidjan by Roberts FIR.

(ASECNA indicated that it requires an agreement between the competent ATS Authorities of the FIR/UIR of Dakar, Roberts and Abidjan Sector).

b)   Delete MAURI on UB 600F (***See Canarias FIR, GCCC)***
c)   Delete KIMGA on UA 600D
d)   Delete MISKI on UM 974
e)   Delete DILPO on UR 620F
f)   Delete KOMOR on UB 600
g)   Delete LUSTI on UA 602

10   DOUALA (Cameroon)
ASECNA is the agency managing the airspace

See Brazzaville FIR.

11.   **HARARE FIR, FVHA (Zimbabwe)**

a)   Realign airway UA 409 (Lusaka-Gabarone to run over IBRAK (crossing with UA 404 and UB 528). At this moment IBRAK will not appear on flight plans along UA 409.
b)   Add name to crossing UA 404D with UB 540, and delete BONAL
c)   At present Harare airport code similar to FIR code, FVHA

12.   JOHANNESBURG FIR, FAJS (South Africa)

a)   At present Johannesburg airport code similar to FIR code, FAJS
(State indicated that this is subject to research until further decision is made)

13. **KANO FIR, DNKK (Nigeria)**

a)   Delete GAMTA on UG 660, position OVSAT on same route is enough
     (State indicated GAMTA is a CRP only for flights at or below FL145 in lower airspace)
b)   Add names to crossings ATS route BD-JS with UV 20, with UV 15
c)   Add name to crossing UV 20 with UR 778
d)   Consider routing UA 604 via JO in stead of JS
     (State has confirmed that this is in progress)

14. **KHARTOUM HSSS** (Sudan)
a)   At present airport code Khartoum similar to FIR code, HSSS

15. **KINSHASA, FIR FZAA** (Democratic Republic of Congo)

a)   Name crossing UHI and UA607.
b)   *Delete UNUTU on UV30*

     (Note :State indicated that UNUTU cannot be deleted as it is a TMA exit point for Gbadolite)

c)   *Delete DESEK, LISAT, EDIKU and INUVA from upper airspace.*

     (Note : That State has decided to maintain them in order to determine the entry/exit points of Mbandaka TMA)

d)   Delete TEKTI on FIR boundary FCCC and FZAA FIR's on UA 607 (compare with other routes from Bangui)
e)   Delete as CRP, DESEK, LISAT, EDIKU, INUVA, NUPON, OVRIG on Mbandaka TMA
f)   Delete CRP at N 0209.6/E 019.37.8, on UV 30 out of MBA VOR
g)   Add name to crossing MBA-KGI with ATS route BSU-LJA and delete BDE029 as CRP
h)   Add names to crossing points UA 609 with UJ 200, UV 30, ATS route BLT-KGI
i)   Delete UNUTU, TUVAB, ISDIM on Gbadolite TMA
j)   Check desirability of UBIDA as non-CRP on UA 610
k)   Change name ENUTU, too similar to UNUTU in same FIR (except if agreed to delete UNUTU)
l)   Add names to crossing points UH 1 with UR 984, UA 610, UA 607, V 48
m)   Add names to crossing points UH 10 with UR 984, UA 607, delete CRP at N 0019.6/E 02238.3
n)   Add name to crossing UB 535 with V 48, confirm TIPER is crossing UB 535 with ATS route KSA-KGI
o)   Add name to crossing UH 325 with UA 607
p)   Delete PONOB, ARABA on UG 450
q)   Delete ULVAS on UA 406
r)   Delete EDLIN as CRP on UG 652

16. **KIGALI - HRYR**

a) Add name to crossing UB532 with UB607
b) At present Kigali airport code similar to FIR code, HRYR

17. **KINSHASA FIR (KISANGANI TMA)**

a) Delete TUSOX on UA607

   (Note : State has decided to maintain TUSOX and delete VABIS)
b) Make ILBOK on UA613 non-CRP.
c) Delete LOSMI on UA613
   (Note : State has decided to maintain it as reporting point UH325/UA613)
d) Delete TENKA and EDUSA on UA607 and create new CRP.

   (Note : State indicated that these points would be maintained)
e) Delete PIRVO and GALIC on UA618.
f) Add names to crossings UH 10 with A 609F, with UA 609F
g) Add name to crossing UB 535 with ATS route IRO-BUN
h) Make ARMEN a CRP
i) Delete DEDIX, EDATO, PILSI, SEROK, ULPIG, TMA boundary (route KGI-BLT), VIVRO on Kisangani TMA
j) Add names to crossings UA 618 with UV 3, with UB 531, UH 1, ATS route BUN-IRO, UG 862
k) Add name to crossing UB 532 with UB 607
l) Add name to crossing ATS route BKV-KMI with UG 450, with UA 613 add name to crossing UV 3 with ATS route KGI-BKV
m) Delete EBERA, TIPLI on Goma TMA
n) Delete ONABA, AVGER, USDUP as CRP's due proximity of PONAL and to be named inters. UG 450/UG 655
o) Add name to crossing UH 325 with UR 984
p) Delete OMOXA on Kisangani TMA
q) Delete GAMEX
r) Add name to crossing ATS route KIN-KMI with UG 450
s) Add name to crossing point UR 984 with Route/Radial 197 out of KGI VOR
t) At present Kisangani airport code similar to FIR code, FIZC

18. **KINSHASA FIR (Lubumbashi TMA)**

a) Give name to intersection on UG 655 ex LUB VOR 88 nm. N of RUNGO
b) Add name to crossing UG 655 with UG 450 and delete USDUP, AVGER, ONABA (all one country)
c) Add name to crossing H4 with UR 984
d) Delete NUTIR on UH 4, use only EDUSA
e) Align either UA 618 or UR 984 to create one crossing point near ONRAB/MOMAX

f)   Delete KWZ as CRP on UA 406 ex LUB VOR, VISMA OK

g)   Add name to crossing V 48 with ATS route KNG-KIN and delete XIRUD/GULAS

h)   Delete AKROS, UBOLO, TAROK, SEXER as CRP on TMA of Kananga

i)   Delete SORGU, ONESI, too close after crossing point TUSEL

j)   Add name to crossing UG 450 with route MBY-KIN and delete UNIRI/INADO

k)   Add names to crossings ATS route KNG-KIN with ATS route MBY-LJA and with UA 607, delete UDRAB

l)   Add names to crossings UA 450 with V 48 and with ATS route MBY-LJA

m)   At present Lubumbashi airport code similar to FIR code, FZQA

19.   **LAGOS (SUB) FIR, DNLL (Nigeria)**

a)   Delete MOPAD as CRP on UA 609
     (State has indicated that MOPAD is a CRP in lower airspace only (at or below FL415)

b)   Delete ONTAL on UR 984
     (State has indicated that ONTAL is a CRP in lower airspace only (at or below FL145)

c)   Add name to crossing point route TYE (Cotonou) - Malabo (MBO) with UR 603
     (State will propose a new route Cotonou-Malabo for inclusion in the AFI plan at ATS SG/7)

d)   Combine ONKOR and Abm OK on crossing route TYE-MBO with UG 856
     (State will propose a new route Cotonou-Malabo for inclusion in the AFI plan at ATS SG/7)

e)   Give name to FIR boundary on route TYE- MBO
     (State will propose a new route Cotonou-Malabo for inclusion in the AFI plan at ATS SG/7)

f)   Confirm proper name of FIR boundary on UG 856, ERAVA on Jepp, EDITO on KL/SK   Chart

20.   **LIBREVILLE TMA (Gabon)**
      ASECNA is the agency managing the airspace
      Same as in II Brazzaville FIR

21.   **LILONGWE FIR, FWLL (Malawi)**

a)   Add names to crossings of UA 407F with UG 656 and W 601

b)   At present Blantyre airport code similar to FIR, FWCL

22.   **LUANDA FIR, FNAN (Angola)**

a)   Confirm APNET and ERDAB are indeed crossing points UA 617 with UG 450 and UH 612 respectively.

b)   Confirm necessity of FIR boundary point INUGA on UG 450 (compare with no boundary point on UH 612)

c)   Route UH 600 direct from KILBI to IMTOP and delete Malanje (MA) as CRP
d)   Re-route UA 617 APRIG direct AKAZU, name ensuing crossings with UG 853 and UV 858, then
e)   Delete TIBAD and EKBOM
f)   Add name to crossing UA 611 with Direct route ARLEM-GETAP and delete ITPIK
g)   Give name to Accra-Luanda FIR boundary on route ARLEM-GETAP
h)   Add names to crossings SAA Direct route Johannesburg-Atlanta (JAINS-BOPAN) with UA 611
i)   Make EGOLI a CRP on UA 611
j)   Give name to FIR boundary Accra-Luanda and Luanda-Johannesburg on route ARLEM-Robben Island

23.   **MAURITIUS FIR** (Mauritius)
At present Mauritius airport code similar to FIR code, FIMP

a)   Make ANVOR (X-ing UG 661 with UR 780F) transfer of control point with Saint Denis TMA, then delete UVENA and APLEM.

24.   **NAIROBI – HKNA** (Kenya)

a)   Add name to crossing UR 611 with ATS route NV-EMAMA
b)   Add name to crossing UG 657 with same
c)   Consider adjusting FIR delineation in order to delete GETAT and ITMAR
      (State indicated that above codes are still maintained as TCPs and cannot be deleted)
d)   Add name to crossing UR 611 with ATS route NV-Malindi (MLD)
e)   Delete MOBAT
f)   Delete MOKAD
      (State indicated that the above code is to be retained as TCP)
g)   Delete GADLA
      (State indicated that the above code is to be retained as TCP)
h)   Delete EKBAD, too close to boundary at APLOG (on UB 532 out of NV)
      (State indicated that the above codes are to be retained as TCPs)
i)   Delete NAKAT or MELMO on UA 609 NV- Entebbe (NN)
      (State indicated that the above codes are to be retained as TCPs in lower airspace)
j)   Delete IMLAT on ATS route NV-Malindi (MLD) (compare with UG 658 out of NV)
      (State indicated that the above code is to be retained as TCP in lower airspace)
k)   Delete KAVAR on UA 609 NV-Mombasa (MOV) (compare with UB 533 out of NV)
      (State indicated that the above code is to be retained as CRP in lower airspace)
l)   Delete EGNOG on ATS route NV-EMAMA (compare with UG 450 out of NV)

25.   **N'DJAMENA FIR, FTTT (Chad)**
      (ASECNA is the agency managing the airspace)
      a)   Make SABSI a non-CRP.
              (ASECNA indicated that SABSI is used as a TCP on the ATS route UR778; this point will be re-examined in order to to be utilized as a non-CRP).
      b)   Delete KOBLA on UG 655F
              (ASECNA indicated that the KOBLA point is also used as a Meteorological reporting point)
      c)   Name CRP at N 0800/E 02004.9
              (ASECNA indicated that the creation of this point must be subject to the requirement of the creation of ATS route on the basis of a meaningful air traffic statistics. The proposition of creation of this point is not accepted at present)
      d)   Add name to crossing point UW 605 with route FL-FA
              (ASECNA indicated that the creation of this point must be subject to the requirement of the creation of ATS route on the basis of a meaningful air traffic statistics. The proposition of creation of this point is not accepted at present)
      e)   Add name to crossing point UB 736 with route FL-FA
              (ASECNA indicated that the creation of this point must be subject to the requirement of the creation of ATS route on the basis of a meaningful air traffic statistics. The proposition of creation of this point is not accepted at present)
      f)   Add name to crossing UG 857 with UB 736 and confirm PITRU is indeed crossing UG 85 with UM 998

26.   **NIAMEY FIR, DRRR (Niger)**
      (ASECNA is the agency managing the airspace)

      a)   Airspace above FL 245 must be managed by the ACC.
              (ASECNA indicated that a relative global survey of the reorganization of the airspace of the ASECNA region is ongoing)

      b)   Delete NANGA, TCP be BIGOM.

              (Note: ASECNA indicated that the suppression of NANGA and the change of BIGOM as TCP requires a preliminary coordination between the ATS Centres of Ouagadougou, Niamey and Accra. BIGOM is used currently as TCP between Abidjan ACC and Ouagadougou ACC.
      c)   Name crossing UG854 and UG858.
              (ASECNA indicated that this proposition has been noted, the point "ZR" will be used as non compulsory Report Point).
      d)   Delete TB as CRP on UB 727
      e)   Delete KILKO on UM 974
      f)   Add name to crossing point UA 615 with ATS route Niamey (NY)-Agades (AS)
              (ASECNA indicated that the designation of this point will be achieved after the placement of this new track of ATS route in the ICAO AFI Air Navigation Plan)

g)   Add names to crossing points D route Bamako - In Salah with UR 981, with UA 614, then delete IPOBA
     (ASECNA indicated that all these new points of the crossings between the new route Bamako–In Salah and UA 614/UM104, UR 981, UR 866 can only be achieved after the placement of this new track of route in the ICAO AFI Air Navigation Plan)
     IPOBA continues to be used as TCP on the ATS route UA 614/UM104 between the FIR/UIR Algiers and Niamey

h)   Add names to all crossing points created by direct route Bobo Dioulasso-Kano
     (ASECNA indicated that, considering the applied procedures and the complexity of the composition of the air traffic circulation in this sector, it doesn't appear at the present time appropriate to create some compulsory reporting points (CRPs) along the line close to the interface with the FIR Accra.)

i)   Add names to all crossing points created by direct route Niamey- Nouakchott
     (ASECNA indicated that, considering the complexity of the composition of the air traffic circulation in this sector, it is not feasible to examine this requirement for an optimisation of the direct itinerary Niamey – Nouakchott which is only activated during the seasonal"Haj operations")

27.   **ROBERTS FIR, GLRB (Guinea/Liberia/Sierra Leone)**

a)   Delete EBRAK as CRP on UG 433 (compare with NAMIB)
b)   Add name to crossing UB 600 with V 207
c)   Add name to crossing UG 854 with UB 727, delete AMKAX
d)   Delete AXIRO, PIMSO, ILGOT, EDBAL, KIMKA
e)   Route UG 854 to cross UR 979 over ARBAL
f)   At present Monrovia airport code similar to FIR, GLRB

28.   **Tripoli FIR, HLLL**

a)   Add name to crossing H 500 with A 18
b)   Add names to crossings G 659 with V 400 and V 300
c)   Add names to crossings UL 731 with A 411, with V 400 and V 300
d)   Add name to crossing UM 727 with A 411 and delete AMWAJ
e)   Add names to crossings UW 857 with UL 731 and A 411
f)   Add name to crossing M 621 with UZ 350 and delete FARUJ
g)   Add names to crossings W 859 with UZ 350, with UM 732, A 411 and W 861
h)   Add names to crossings G 661 with G 660 and W 861
i)   Add name to crossing B 21 with G 663/UM 999
j)   Delete TWARG on route DJA-GHT and make GHT transfer of control point
k)   Add names to crossings UM 999 with UW 986, with W 853 and UG 13/UM 731
l)   Add names to crossings W 861 with UW 986, with W 858, with W 853
m)   Add names to crossings W 853 with UG 655, W 858, UW 986
n)   Add names to crossings UG 655 with V 900, G 855, A 18, W 853
o)   Add names to crossings A 18 with UW 986, W 858

29. **Tunis FIR, DTTC**

Whilst it is recognized that the Tunis FIR is virtually fully radar covered, it is still recommended that all airway crossings be given names. This to allow aircraft data bases to have access to these names and thus provide an additional contingency redundancy, such as in case of radar outage. These named airway crossings can be made non-compulsory reporting points.

30. **WINDHOEK FIR, FYWH (Namibia)**

a) Delete MIDNA as a result
b) Add names to crossings D-route GETAP (on boundary with Luanda FIR)- GBV with R 987, UA   617, A 404
c) Delete OMATA
d) Change name of FIR as FYWH is also used as Windhoek airport designator.

LIST OF PROHIBITED, RESTRICTED AND DANGER AREAS
IN THE AFI REGION

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
Algeria - Algiers	DAP51 : GND - UNL		
	DAP58 : GND - UNL		
	DAP60 : GND - UNL		
	DAD79 : GND - UNL		
	DAD 82 : GND - UNL		
Angola - Luanda	FNR8 : GND-FL150	A/G firing and bombing	FLTS Forbidden during activity
	FNR10 : GND-FL100	Military training flights	
	FNR11 : GND-FL100	Military training flights	
	FNR12 : GND-FL50	Military training flights	
	FNR13 : GND-FL1500 FT	Military training flights	
	FNR14 : GND-FL1500FT	Military training flights	
	FNR15 : GND-FL1500FT	Military training flights	
Benin - Cotonou	DBD 1 :GND/MSL – 4000FT	Firing and military activities	Activitated by NOTAM
Burkina Faso - Ouagadougou	DFR 1 : GND – FL240	Military activities	Activitated by NOTAM
- Bobo-Dioulasso	DFR 2 : GND – FL240	Military activities	Activitated by NOTAM
Botswana-Gaborone	FBP1 : GND-2000FT		Avoid area at all times
	FBP3 : GND-FL125		Military airfield avoid at all times
	FBP5 : GND-2500FT		Military activities
	FBR20 : 7000-FL220		Military activities
	FBR25 : 7000-FL460		Military activities
	FBR10 : GND-1000FT		National park
	FBR11 : GND-1000FT		Game reserve
	FBR12 : GND-1000FT		Game reserve
	FBR13 : GND-1000FT		National park
	FBR14 : GND-1000FT		National park
	FBR15 : GND-1000FT		National park
	FBR18: GND-FL125		Avoid area at all times
	FBR24 : GND-2000FT		Flamingo breading ares
	FBD6 : GND31000FT		Rock blasting
	FBD9 :GND 6000FT		Rock blasting
Burundi - Bujumbura	Nil	Nil	Nil
Cameroon - Foumban	FKP 1 : GND-FL130	Parachuting	Permanent activity
- Mbandjok	FKP 2 : GND – FL80	Parachuting	Permanent activity
- N'Gaoundere Falaise	FKP 3 : GND – 6000FT :GND-10000FT	Ground and Anti-Air firings Permanent Prohibition	Activated by NOTAM
-Cap Limboh	FKP5 : GND - UNL	Permanent prohibition	Overflight of refinery is prohibited.
-Yaounde	FKP 6 : GND-FL245	Permanent prohibition	Prohibition includes aircraft on Approach/departure phases of flight.
-Bakassi	FKP 7 : GND-FL250	Permanent prohibition	
-Mike	FKP 8 : GND/MSL -FL245	Permanent prohibition	
-Kribi	FKD 4 : MSL-FL245	Permanent prohibition	Air/Ground Firings activated

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
			by NOTAM
Yaounde Zone Sud	FKR 9 : FL45-FL245		Activated by Yaounde TWR
Yaounde Zone Nord	FKR 10 : FL45-FL245		Activated by Yaounde TWR
Garoua	FKR 11 : FL60-UNL		Activated by Garoua TWR
Garoua	FKR 12 : FL60-UNL		Activated by Garoua TWR
Centrafrique - Baoli	FEP 3 : GND-1000 Metres	Permanent activity	
Sakoulou	FED 1 : GND-300 Metres	Parachuting	Activated by NOTAM
Congo-Brazzaville/Mayamaya Military base	FCP1 : GND-1000Metres	Permanent prohibition	
-Kinkala/Sud	FCP2 : GND-UNL		Activated by Air Traffic Control
M'pila/Brazzavile Mayamaya	FCP3 : GND-FL70		Presidential Zone
	FCD4 : GND-FL245	Firing Zone	Activated by NOTAM
-Pointe Noire	FCD5 : GND-3000Metres	Parachuting	Activated on every Wednesday, Thursday and Saturday between 1300-1700 UTC otherwise activated by TWR on exceptional cases.
Maya-Maya	FCD6 : GND-3000M	Parachuting	Activated on every Wednesday between 0600-1000 UTC otherwise as activated by TWR.
Biloko	FCD7 : GND-2000M	Parachuting	Activated by TWR
Kibouende	FCD8 : GND-2000M	Parachuting	Activated by TWR
	FCR9 : GND-FL245		Activated by ATC unit.
Chad – N'djamena-Farcha	FTD 2 :GND-4000M	Parachuting	Activated daily
-Massaguet		Firing	Activated by NOTAM
Cote d'Ivoire-Fetekro	DIP1 :GND-FL245		Air Firings from Monday-Friday at 0800-1800.
	DIR1 :FL100-FL245	Military aircraft training	Mon-Fri from 0800-1800 Activated by Bouake TWR
	DIR2 :FL100-FL245	Military aircraft training	Mon-Fri from 0800-1800 Activated by Bouake TWR
	DIR3 :FL100-FL245	Military aircraft training	Mon-Fri from 0800-1800 Activated by Bouake TWR
-Dobou	DIR 4 :GND-600M	Parachuting	Mon-Fri from 0700-1800 and Sat from 0700-1430
	:GND-3500M	Parachuting	Sat from 1430-1800, Sun and Holidays from 0800-1800
-Abidjan	DID 1 :GND-600M	Parachuting	Permanent day activity
	:Above 600M	Parachuting	Activated by NOTAM with 48 hours notice.
Dem. Rep of Congo			
-Shinkolobwe	FZP1 :		Overflight Prohibited up to a certain altitude
-Mont Ngaliema	FZP2 :		Overflight Prohibited up to a certain altitude
-Nbanza-Ngungu	FZP3 :		Overflight Prohibited up to a certain altitude
-Kamina Base	FZD1 :		Overflight is subject to ATC
-Mbankana	FZD2 :		Overflight is subject to ATC

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
-Bukavu Kavumu	FZD3 :		Overflight is subject to ATC
-Matadi Tshimpi	FZR1 :		Overflight is subject to ATC
-Kinshasa/N'dolo	FZR2 :		Overflight is subject to ATC
-Kinshasa/N'djili	FZR3 :		Overflight is subject to ATC
-Kimbambi	FZR4 :		Overflight is subject to ATC
-Kinsembo	FZR5 :		Overflight is subject to ATC
-Likasa-Kamatunda	FZR6 :		Overflight is subject to ATC
-Kamina-Base	FZR7 :		Overflight is subject to ATC
-Kitona et Muanda	FZR8 :		Overflight is subject to ATC
-Luga	FZR9 :		Overflight is subject to ATC
-Parc Nat de Virunga	FZR10 :		Overflight is subject to ATC
-Kalemie	FZR11 :		Overflight is subject to ATC
-Kotakoli	FZR12 :		Overflight is subject to ATC
-Goma	FZR13 :		Overflight is subject to ATC
Egypt - Cairo	HEP 1 :GND UNL		
	HEP 2 :GND UNL		
	HEP 16 :GND UNL		
	HEP 18 :GND UNL		
	HEP 19 :GND UNL		
	HEP 20 :GND UNL		
	HED 4 :GND UNL		
	HED 5 :GND UNL		
	HED 10 :GND - FL400		
	HED 12 :GND UNL		
	HED 14 :GND – FL400		
	HED 22 :GND – 50,000		
	HED 23 :GND – FL350		
Ethiopia – Addis Ababa	HAR 1 – GND – FL290		
Eritrea - Asmara	HHP – 1 : GND - UNL		
Gabon - Libreville	FOP1 : MSL - UNL		Overflight prohibited to all aircraft
-Libreville	FOP 2 : GND/MSL-UNL		Overflight prohibited to all aircraft
-Libreville	FOP3 :GND-UNL		Overflight prohibited to all aircraft
-Ayeme	FOD4 :GND-3000M	Parachuting	Activated by Libreville and Port Gentil TWR
-Nzomo	FOD5 :GND-3000M	Parachuting	Activated by Libreville and Port Gentil TWR
-Dom-les-bam	FOD6 :GND-3000M	Parachuting	Activated by Libreville and Port Gentil TWR
-Mvengue	FOD7 :GND-FL95	Air/Ground Firing	Activated daily from 0600 – 1700 UTC
-Libreville	FOD8 :GND-3000M	Parachuting	Activated by Libreville and Port Gentil TWR
	FOD9 :GND/MSL-UNL	Firings	Activated by Libreville and Port Gentil TWR
-Le point - Denis	FOD10 :GND 3000M	Parachuting	Activated by Libreville and Port Gentil TWR
	FOD11 : FL65 - UNL	Training Flights	Activated by Libreville and Port Gentil TWR
-Mvengue	FOD12 :	Training on high and middle altitudes.	Activated daily from 0600 – 1700 UTC.

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
Zone A : Hors TMA Mvengue	FL105-FL500		
Zone B : Au dessus de la TMA Mvengue	FL245-FL500		
Gambia – Banjul	GBP 1 : GND-FL55		Permanent
-Kassa Kunda	GBD 1 : GND-FL55		Permanent
Ghana – Osu Castle	DGP 1 :GND-4000FT		Permanent
-Tokaradi	DGR6 : :GND-FL65	GAF Local Flying	Permanent
-Tamali Air Force Training Area	DGR7 :ALT7000FT-FL225	High level flying training	0600-1800 daily
-Tamali Air Force Training Area	DGR8 :GND-FL65	Low level training	0600-1830 daily
Tamale	DGR9 :GND-200FT	Parachute dropping	By NOTAM
Tamale	DGR10 :GND-2000FT	Parachute dropping	By NOTAM
Tamale	DGR11 :GND-2000FT	Parachute dropping	By NOTAM
-Bundase	DGD2 :GND-10000FT	Gun Firing	By NOTAM
-Teshie	DGD3 :GND-1200	Gun Firing	By NOTAM
-Sekondi/Takoradi	DGD4 :GND-MSL-UNL	Naval Gun firing	By NOTAM
-Tema	DGD5 :GND-MSL-UNL	Gun Firing	By NOTAM
-Guinea	R1 :FL060-FL170	Military Exercise	Activated by NOTAM and Conakry APP
	R2 :FL060-FL170	Military Exercise	Activated by NOTAM and Conakry APP
	R3 :FL060-FL170	Military Exercise	Activated by NOTAM and Conakry APP
	R4 :FL060-FL170	Military Exercise	Labe TWR
	R5 :FL060-FL170	Military Exercise	Labe TWR
	R6 :FL060-FL170	Military Exercise	Labe TWR
	R7 :FL060-FL170	Military Exercise	Labe TWR
Kenya - Nairobi	HKP 2 : GND - UNL		
	HKR 10 : GND - 45000		
	HKD 3 : GND - 29000		
	HKD29 :GND - 25000		
Liberia	R41 :GND-3000FT	OMEGA Mast	Restricted H-24
	D42 :GND-FL65	Gunnery	Activated by NOTAM and ATC
	D42 :GND-FL65	Gunnery	Activated by NOTAM and ATC
Libya - Tripoli	HLR 54 :GND - UNL		
	HLR 55 :GND - UNL		
	HLR 56 :GND – FL245		
	HLR 57 :GND - UNL		
	HLR 58 :GND - UNL		
	HLR 59 :GND - UNL		
	HLR 60 :GND - UNL		
	HLR 61 :GND - UNL		
	HLR 62 :GND - UNL		
	HLR 63 :GND - UNL		
	HLR 54 :GND - UNL		

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
Madagascar - Antananarivo	FMP – Antananarivo city : GND – UNL		
	FMR 24 : GND – UNL		
	FMR 25 : GND – UNL		
	FMR 27 : GND – UNL		
	FMR 29 – 34 : GND UNL		
	FMR 36 : GND – FL245		
	FMD5 : GND FL460		
	FMD 26 : GND – UNL		
	FMD 50 : GND – FL460		
Malawi - Lilongwe	FWD 1 : GND – FL230		
Mali - Bamako	GAP1 :GND – FL410	Military activites	Active daily
-Kati	GAP 3 : GND - 3000	Firings	Active daily
	GAR 2 : GND-FL30		Overflight perm is to be granted by DCA.
-Sirakoroni	GAD 2 : FL50-FL410	Flight training	Activated by NOTAM
-Sibi	GAD 3 : FL 50-FL410	Flight Training	Activated by NOTAM
-Simidji	GAD 4 : FL 50-FL410	Flight Training	Activated by NOTAM
Mauritania	GQD 1 : GND-2000M	Parachuting	Activated by NOTAM
	GQD 2 : GND-2000M	Parachuting	Activated by NOTAM
	GQD 3: GND-2000M	Parachuting	Activated by NOTAM
	GQD 4 : GND-2000M	Parachuting	Activated by NOTAM
	GQD 5 : GND-9000M	Firings	Activated by NOTAM
	GQD 6 : GND-1000M	Firings	Activated by NOTAM
	GQD 7 : GND-2000M	Firings	Activated by NOTAM
	GQR 1 : GND – 1000M		National Park
Morocco - Cassablanca	GMP02 : GND – UNL		
	GMP09 : GND – 8000FT		
	GMP10 : GND – FL200		
	GMP05 :GND – FL50		
Mauritius - Mauritius	FID5 : MSL - 40000		
Mozambique - Beira	FQR32 : GND - UNL		
	FQR33 : GND -UNL		
	FQD23 : GND - UNL		
	FQD25 : GND - UNL		
Namibia-Windhoek-	FYR131 : GND – FL240		
	FYR132-GND-FL220		
	FYR133-GND-FL220		
Niger – Anou Araren	GND – FL70		
Nigeria - Lagos	DNP1 : GND – 1500FT	Aerostat	
-Lanlate	DNP2 :GND-2000FT	Aerostat	
-Lagos	DNP3 :GND-15000FT	Aerostat	
-Abuja	DNP4 :GND-UNL	3	
	DNR1 :GND-10000FT	Helicopter Area by NAF	Pilots warned to avoid area.
	DNR2 :GND-FL100		
	DNR3 : GND – FL120	Military training	0600-1800 daily
	DND 1 : MSL-30000FT	Marine gunnery	Activated by NOTAM
	DND 2 : MSL-30000FT	Marine gunnery	Activated by NOTAM

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
	DND 3 : MSL-30000FT	Marine/Navy exercises	Activated by NOTAM
	DND 4 : MSL-30000FT	Marine/Navy exercises	Activated by NOTAM
	DND 5 : MSL-30000FT	Marine/Navy exercises	Activated by NOTAM
	DND 6 : MSL-30000FT	Marine/Navy exercises	Activated by NOTAM
	DND 7 : MSL-30000FT	Marine/Navy exercises	Activated by NOTAM
	DND 8 : MSL-30000FT	Marine gunnery	Activated by NOTAM
	DND 9 : MSL-30000FT	Marine gunnery	Activated by NOTAM
-Kano	DND 10 : MSL-30000FT	Air Firing Range	0700-1200 weekdays
-Lagos	DND 11 : MSL-30000FT	Air Firing Range	0700-1200 weekdays
	DND 12 : GND-40000FT	Kachia Military Range	Pilots warned to avoid area
	DND 13 :GND-40000FT	Kontagora Military Range	Pilots warned to avoid area
Senegal – Thies	GOP 1 :GND-FL100	Training flights	Pilots warned to avoid area
-Thies	GOD7:Announced by NOTAM	Firing	Activated by NOTAM
-Thies	GOD 8 :GND – 1000M	Parachuting	Activated by NOTAM
Semou Djimitte	GOD 9 :GND – 1000M	Firing	ActivateH24 daily
Sangalkam	GOD 12 :GND – 400M	Parachuting	Activated by NOTAM
Niaga	GOD 13 :GND – 400M	Parachuting	Activated by NOTAM
M'baouane	GOD 14 :GND –400M	Parachuting	Activated by NOTAM
M'bour	GOD 15 :GND – 400M	Parachuting	Activated by NOTAM
Taiba	GOD 16 :GND – 400M	Parachuting	Activated by NOTAM
Tambacounda	GOD 17 :GND – 500M	Firing	Activated daily
-Botou	GOD 21 :GND – 35000M	Firing	Activated by NOTAM
	GOR6 :GND – FL195	Training flights	Activiated by Dakar TWR
	GOR7 :150M-FL50	Training flights	Activated by NOTAM
	GOR8 :GND – FL40		No over flight below FL40
South Africa-hannesburg	FAR 20 : GND-UNL		
	FAR 23 : GND-FL460		
	FAR 25 : GND-UNL		
	FAR 27 : FL90-F280		
	FAR 29 : GND-UNL		
	FAR 45A : 1500 – FL460		
	FAR 45B : FL120 – FL460		
	FAR 47 : GND-UNL		
	FAR 71 : GND-FL250		
	FAR 147 : FL460		
	FAR 148 : UNL		
	FAD 26 : FL130 – FL460		
	FAD 30 : FL130 – FL280		
	FAD 53 : GND - FL390		
	FAD 143 : GND - FL460		
Sudan - Khartoum	HSP – AREA GND – UNL		
	HSP1 :GND – FL270		
	HSP7 :GND-FL280		
	HSP8 :GND-UNL		
	HSP6 :GND-UNL		
Tanzania – Dar-es-Salaam	HTP6 :GND – UNL		
Togo- Lome	DXP1 :GND-FL35		
-Lome	DXP2 :GND-FL35		
-Lome	DXP3 :GND-FL35		
	DXR1 :GND-FL400		Training Flights
	DXR2 :GND-FL400		Military training flights

STATE/FIR	DESCRIPTION LIMITS	TYPE RESTRICTION	REMARKS
-Lome	DXD1 :GND-FL140	Parachuting	Up to FL115 activated by TWR and above FL115 by NOTAM
Tunisia - Tunis	DTP3 :GND-UNL		
	DTR9 :GND-FL55-FL280		
	DTR9 :FL105-FL280		
	DTR10 :GND-FL460		
	DTR10 :A, B, C : FL130-FL280		
	DTR28 :GND-UNL		
	DTRD 5A, B :NOTAM		
	DTRD11 :MSL - UNL		
Uganda- Entebbe	HUP1 :GND-UNL		
	HUP7 :GND-UNL		
	HUD2 :GND-UNL		
	HUD3 :GND-UNL		
Zambia-Lusaka	FLP4 :GND - UNL		
	FLD23 :GND-UNL		
Zimbabwe- Harare	FVP1 :GND UNL		
	FVP2 :GND – FL290		
	VRP6 :GND – UNL		
	FVR30 :12000 UNL		
	FVR31 : GND UNL		
	FVR60 :GND UNL		

RÉGIONS D'INFORMATION DE VOL   AFI FASID - SSR CODE PLAN / PLAN D'ATTRIBUTION DU CODES SSR (APPENDIX-G)   FLIGHT INFORMATION REGIONS

AERODROME AIS UNITS REQUIRING IMPLEMENTATION IN THE ESAF STATES

AERODROME AIS UNITS TO BE ESTABLISHED	ANGOLA	BOTSWANA	COMOROS	ERITREA	MADAGASCAR	NAMIBIA	SOMALIA	SOUTH AFRICA
HUAMBO	X							
FRANCISTOWN		X						
ANJOUAN/OUANI			X					
ASSAB				X				
MAHAJANGA/AMBOROVY					X			
TOAMASINA					X			
KEETMANSHOOP						X		
BERBERA							X	
BURAO							X	
MOGADISHU							X	
KISIMAYU							X	
JOHANNESBURG/RAND								X

AERONAUTICAL INFORMATION SERVICES IMPLEMENTED AT AERODROMES IN THE WACAF REGION

EXPLANATION OF THE TABLE

Column

1   Name of the aerodrome or location where aeronautical information services implemented

2   Designation of aerodrome:
     RS   —   international scheduled air transport, regular use
     RNS —   international non-scheduled air transport, regular use
     RG   —   international general aviation, regular use
     AS   —   international scheduled air transport, alternate use

3   ICAO location indicator of the aerodrome

4   Name of the AIS office responsible for the provision of aeronautical information service at the aerodrome concerned indicated in column 1

5   ICAO AFTN address of the responsible AIS office

6   AIS information to be available at the aerodrome:

    AIP+: Includes AIP and Amendments, AIP Supplements, NOTAM, AIC
        L - country in which the aerodrome is located
        S - surrounding countries
        FIL - all countries up to and including the aerodrome of first intended landing

    PIB: Pre-flight Information Bulletins
        P1 - Aerodrome (AD) format
        P2 - Area format, AD format
        P3 - Route format, Area format, AD format

    PREP: Preparation method of PIB
        C - Centralized preparation
        L - Local preparation (at the aerodrome concerned)

7   Area of coverage by AFTN routing areas for which aeronautical information/flight documentation is available
    Note.— The AFTN routing areas are shown on FASID Chart MET 1

8   Availability of Post-Flight Reporting Forms

9   Remarks
    (Indicate where processing of aeronautical information is automated/database).
        A - Automated

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+				PIB			
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	F I L	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
BENIN			AEROCIVIL COTONOU, DAC. Cotonou.	DBBBYAYX								
COTONOU/Cadjehoun	RS	DBBB			X	X	X	P2			X	
BURKINA FASO			MINITP OUGADOUGOU, DAC, Ouagadougou. (ASECNA).	DFFVYAYX								
BOBO-DIOULASSO/Bobo-Dioulasso	RS	DFOO			X			P2			X	
OUAGADOUGOU/Ouagadougou	RS	DFFD			X	X		P2			X	
CAMEROON			AEROCIVILE YAOUNDÉ, DAC, Yaoundé. (ASECNA).	FKKYYAYX								
DOUALA/Douala	RS	FKKD			X	X	X	P2			X	
GAROUA/Garoua	RS	FKKR			X	X		P2			X	
MAROUA/Salak	RS	FKKL			X	X		P2			X	
N'GAOUNDERE/N'Gaoundere	AS	FKKN			X	X		P2			X	
YAOUNDE/Nsimalen	RS	FKYS			X	X	X	P2			X	
CAPE VERDE			AVIACIVIL SAL, ASA ENASA, Aeroporto Amilcar Cabral, Ilha do Sal.	GVACYOYX								
PRAIA/Francisco Mendes	RS	GVFM			X	X		P2			X	
SAL I./Amilcar Cabral	RS	GVAC			X	X	X	P3			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided				Area of coverage by AFTN routing areas	Post Flight Report	Remarks
CENTRAL AFRICAN REPUBLIC			DIREGENAVIA CIVIL BANGUI, DGACM, Bangui.	FEFVYAYX							
BANGUI/M'Poko	RS	FEFF			X	X	X	P3		X	
BERBERATI/Berberati	RS	FEFT			X	X		P2		X	
CHAD			DAC, N'Djamena.	FTTVYAYX							
N'DJAMENA/N'Djamena	RS	FTTJ			X	X	X	P3		X	
SARH/Sarh	RS	FTTA			X			P2			
COMOROS			AVIACIVIL MORONI, DAM, Moroni.								
ANJOUAN/Ouani	RS	FMCV			X	X		P2		X	
DZAOUDZI/Pamanzi, Mayotte I.	RS	FMCZ			X	X		P2		X	
MORONI/Hahaia	RS	FMCH			X			P1		X	
CONGO			AVIACIVILE BRAZZAVILLE, ANAC, Brazzaville. (ASECNA)	FCBVYAYX							
BRAZZAVILLE/Maya-Maya	RS	FCBB			X	X	X	P3		X	
POINTE NOIRE/Agostino Neto	RS	FCPP			X	X		P2		X	
COTE D'IVOIRE			ANAM, Abidjan. (ASECNA)	DIAPYAYX							
ABIDJAN/Felix Houphouet Boigny Intl	RS	DIAP			X	X	X	P3		X	
BOUAKE/Bouake	RS	DIBK			X	X		P2		X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided				Area of coverage by AFTN routing areas	Post Flight Report	Remarks
DEMOCRATIC REPUBLIC OF THE CONGO			NOFKIN, SIA, RVA, Kinshasa/N'Dolo.	FZAZYOYX							
GOMA/Goma	RS	FZNA			X	X		P2		X	
KINSHASA/N'Djili	RS	FZAA			X	X	X	P3		X	
KISANGANI/Bangoka	AS	FZIC			X	X		P2		X	
LUBUMBASHI/Luano	AS	FZQA			X	X	X	P2		X	
EQUATORIAL GUINEA			DGAC, Malabo. (ASECNA)	FGSLYFYX							
MALABO/Malabo	RS	FGSL			X	X		P2		X	
GABON			AVIACIVILE LIBREVILLE, SGACC, Libreville. (ASECNA)	FOOVYAYX							
FRANCEVILLE/M'vengue	RS	FOON			X	X		P2		X	
LIBREVILLE/Leon M'Ba	RS	FOOL			X	X	X	P2		X	
PORT GENTIL/Port Gentil	RS	FOOG			X	X		P2		X	
GAMBIA			AIS, Banjul International Airport	GBYDYOYX							
BANJUL/Banjul Intl	RS	GBYD			X	X		P2		X	
GHANA			AIS GCAA, Kotoka International Airport, Accra	DGAAYOYX							
ACCRA/Kotoka Intl	RS	DGAA			X	X	X	P3		X	
KUMASI/Kumasi	RS	DGSI			X	X		P2		X	
TAMALE/Tamale	RS	DGLE			X	X		P2		X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
GUINEA			CIVIL AVIATION CONAKRY, AIS Conakry	GUCYYOYX								
BOKE/Baralande	RS	GUOK			X	X		P2			X	
CONAKRY/Gbessia	RS	GUCY			X	X	X	P3			X	
FARANAH/Badala	RS	GUFH			X	X		P2			X	
KANKAN/Diankana	RS	GUXN			X	X		P2			X	
LABE/Tata	RS	GULB			X	X		P2			X	
N'ZEREKORE/Konia	RS	GUNZ			X	X		P2			X	
GUINEA-BISSAU			AEROCIVIL BISSAU, DGAC Bissau	GGOVYAYX								
BISSAU/Osvaldo Vieira Intl	RS	GGOV			X	X		P2			X	
LIBERIA			CIVILAIR MONROVIA, DCA Monrovia	GLMCYAYX								
MONROVIA/Roberts Intl	RS	GLRB			X	X	X	P3			X	
MALI			AVIACIVIL BAMAKO, DNAC, Bamako	GABVYAYX								
BAMAKO/Senou	RS	GABS			X	X	X	P3			X	
GAO/Gao	RS	GAGO			X	X		P2			X	
KAYES/Kayes	RS	GAKY			X	X		P2			X	
KIDAL/Kidal	RS	GAKL			X	X		P2			X	
MOPTI-BARBE/Mopti-Barbe	RS	GAMB			X	X		P2			X	
NIORO/Nioro	RS	GANR			X	X		P2			X	
TOMBOUCTOU/Tombouctou	RS	GATB			X	X		P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided				Area of coverage by AFTN routing areas	Post Flight Report	Remarks
MAURITANIA			MINITRANS NOUAKCHOTT, DAC Nouakchott. (ASECNA).								
ATAR/Atar	RS	GQPA			X	X		P2		X	
NEMA/Nema	RS	GQNI			X	X		P2		X	
NOUADHIBOU/Nouadhibou	RS	GQPP			X	X	X	P3		X	
NOUAKCHOTT/Nouakchott	RS	GQNN			X	X	X	P3		X	
ZOUERATE/Zouerate	RS	GQPZ			X	X		P2		X	
NIGER			AVIACIVILE NIAMEY, DAC Niamey. (ASECNA)	DRRVYAYX							
AGADES/Sud	RS	DRZA			X	X		P2		X	
NIAMEY/Diori Hamani Intl	RS	DRRN			X	X	X	P3		X	
ZINDER/Zinder	AS	DRZR			X	X		P2		X	
NIGERIA			AIRCIVIL LAGOS, NAMA-ATS-AIS, Ikeja.	DNLLYAYX							
ABUJA/Nnamdi Azikiwe	RS	DNAA			X	X		P2		X	
CALABAR/Calabar	RS	DNCA			X	X		P2		X	
ILORIN/Ilorin	AS	DNIL			X	X		P2		X	
KADUNA/Kaduna	RS	DNKA			X	X		P2		X	
KANO/Mallam Aminu Kano Intl	RS	DNKN			X	X	X	P3		X	
LAGOS/Murtala Muhammed	RS	DNMM			X	X	X	P3		X	
MAIDUGURI/Maiduguri	RS	DNMA			X	X		P2		X	
PORT HARCOURT/Port Harcourt Intl	RS	DNPO			X	X	X	P3		X	
SOKOTO/Abubakar Saddiq III Intl	RS	DNSO			X	X		P2		X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided				Area of coverage by AFTN routing areas	Post Flight Report	Remarks
SAO TOME & PRINCIPE			ENASA SAO TOME, ENASA-AIS, Aerporto de Sao Tome	FPSTYOYX							
SAO TOME/Sao Tomé	RS	FPST			X	X	X	P3		X	
SENEGAL			AVIACIVIL DAKAR, DAC, Dakar/Yoff.	GOOOYAYX							
CAP SKIRING/Cap Skiring	RS	GOGS			X	X		P2		X	
DAKAR/Leopold Sedar Senghor Intl	RS	GOOY			X	X	X	P3		X	
SAINT LOUIS/Saint Louis	RS	GOSS			X	X		P2		X	
TAMBACOUNDA/Tambacounda	RS	GOTT			X	X		P2		X	
ZIGUINCHOR/Ziguinchor	RS	GOGG			X	X		P2		X	
SIERRA LEONE			AIRCIVIL FREETOWN, DCA-MTC, Freetown	GFLLYAYX							
FREETOWN/Lungi	RS	GFLL			X	X	X	P3		X	
TOGO			MINCOMMERCE LOMÉ, MCT, Lomé, (ASECNA).	DXXXYAYX							
LOME/Tokoin	RS	DXXX			X	X	X	P3		X	
NIAMTOUGOU/Niamtougou	RS	DXNG			X	X		P2		X	